

SUMMER TRAINING
AT
FORTIS LA FEMME, HOSPITAL FOR WOMEN HEALTH,
BANGALORE

From 10TH May 2021 To 2ND July 2021

***Study of the End-to-End Process of the Conversion of
Outpatient to Inpatient Department***

BY

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Date: 2nd July 2021

INTERNSHIP COMPLETION CERTIFICATE

This is to certify that **Dr Saili Rajendra Lahare**, student of MBA (Hospital and Health Management) Batch 2020 -2022 IIHMR University, Jaipur has successfully completed her internship with **Fortis La Femme, Hospital** for Women and children, Bangalore.

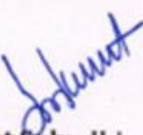
Department: Administration

Project Title: Study of the End-to-End Process of the Conversion of Outpatient to Inpatient Department.

Project Duration: **10th May 2021 to 2nd July 2021**

During the period of her internship with us she was committed, sincere & diligent learner.

We wish her all the best for her future endeavours.


Srikant Subudhi
Facility Director
Fortis Lafemme, Bangalore

ACKNOWLEDGEMENT

“No one who achieves success does so without the help of others. The wise and confident acknowledge this help with gratitude”

- Alfred North Whitehead.

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ABBREVIATIONS

EDD	Estimated Delivery date
OPD	Outpatient Department
IPD	Inpatient Department
IVF	In vitro Fertilization
NICU	Neonatal Intensive Care Unit
MICU	Medical Intensive Care Unit
EPABX	Electronic Private Automatic Branch Exchange
TPA	Third Party Administration
LDR	Labor Delivery Room
PACU	Post Anesthesia Care Unit
OT	Operation Theater
CSSD	Central Sterile Supply Department
OP	Outpatient
IP	In Patient

ABOUT THE HOSPITAL

Fortis La Femme, Centre for Women Health, Bangalore

Fortis Healthcare Limited, a part of IHH Healthcare Berhad, is a prominent supplier of integrated healthcare services in India. With 36 hospital facilities (including projects in the works), 4000 operating beds, and over 400 diagnostics centres, it is one of the country's major healthcare organisations (including JVs). The company is traded on the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). It builds on its culture of world-class patient care and exceptional clinical competence thanks to its relationship with global major and parent business, IHH. Fortis (includes SRL) employs 23,000 individuals who share the company's mission of being the world's most trusted healthcare network. Fortis provides a comprehensive range of integrated healthcare services, including clinics, quaternary care facilities, and a variety of auxiliary services.

Fortis La Femme is recognized for providing unique prenatal and postnatal care to all expectant moms through a variety of services such as Yoga, Lamaze, Exercise, Reflexology, and other Mamma Mia services. The hospital also houses the Amaara Human Milk Bank, Karnataka's only non-profit human breast milk bank, which opened in October 2017. Fortis La Femme is a multi-specialty hospital that focuses on the health of women and children. The hospital was founded on the idea that every woman is unique and requires unique medical treatment. Women's emotional, physical, and mental well-being are prioritized at Fortis La Femme Bengaluru. The institution's goal is to dispel the myth that women's health is confined to childbirth. La Femme is a generalist in the area of medicine.(1)

Fortis La Femme Bengaluru was set up in the year 2015. Since its establishment, the hospital has diligently worked towards improving the healthcare arena for women and children. The medical experts and paramedical staff at the hospital consider each medical need as a priority. The hospital is a distinctive boutique facility. Fortis La Femme Bengaluru ensures that the medical needs of a family are met entirely. The programs designed by medical professionals are considerate of every new phase of womanhood. Fortis La Femme is a National Accreditation Board for Hospitals and Healthcare Providers (NABH) Pre- accredited hospital. The Centre's building is placed on a massive campus. The hospital is equipped with cutting-edge facility. The state-of-the-art hospital is supported by the most modern technologies.

For all phases of a woman's life—birth, adolescence, parenthood, menopause, and beyond—Fortis La Femme is India's premier healthcare provider. Fortis La Femme is a one-of-a-kind institution founded on the idea that a woman is a unique individual with distinct requirements.(2).

VISION: To be a globally respected women and child healthcare provider.

MISSION: To be the global healthcare destination for women and children with world-class clinician's superlative nursing and empathetic teams creating a culture of patient centricity where they feel safe, pampered, and nourished in mind, body, and spirit.

VALUES:

- Excellence in women and child healthcare.

- Progressive workforce, sensitive to diverse cultures and ethnicities.
- Empowering women.
- Care and compassion by all; for all.
- Transparency in dealing with patients and employee.

Infrastructure and Technology

Fortis La Femme Bengaluru is furnished with 72 hospital beds. The technologically advanced hospital is spread over an area of approximately 70,000 sq. ft. The hospital campus has been designed considering patient safety and additional amenities(3).

The teams of highly skilled doctors working at this institution with the support of high-tech equipment for best-in-class treatment. The competence of doctors coupled with modern automation makes the hospital a preferred place for treatment.

The state-of-the-art infrastructure of the hospital covers not only necessary medical requirements like laboratories, blood bank but also additional value-based outlets like cafeteria and ATM.

Fortis La Femme Bengaluru is well-known for its unique quality clinics that ensure paramount health for its patients.

- Adolescent Clinic (PCOS & Obesity)
- Menopause Clinic
- Breast Clinic

Room categories at Fortis La Femme Bengaluru

The hospital wishes for everyone in India and abroad to be able to access its services according to their preferences. To fulfill this, there are several room categories. These categories are economically diverse and can suit the pockets of people from different lines of business(3).

- Presidential suite
- Suite
- Deluxe
- Single
- Twin Sharing
- General Ward

The hospital is also equipped with the latest Radiology and Medical ICU with Tertiary level 3 NICU.

Core Medical Specialties

Fortis La Femme Bengaluru grants medical maintenance and care across 16 clinical specialties.

- Obstetrics
- Fertility and IVF
- Gynecology
- Oncology (Medical & Surgical)
- Cosmetic Surgery
- General & Laparoscopic Surgery
- Urogynecology
- Fetal Medicine
- Endocrinology
- Pediatrics
- Radiology
- Clinical Nutrition and Dietetics
- Internal Medicine
- Endocrinology
- Orthopedics
- ENT
- Emergency

Services Available:

Women Healthcare:

Women in different age group have different health concerns, which are appropriately addressed.

Maternity Care:

Fortis La Femme Hospital combines cutting-edge technology with exceptional care to provide a wide range of treatments, including normal and C-section births, painless deliveries, high-risk pregnancy management, and late pregnancies, among others.

High risk pregnancy management:

Fortis La Femme, which is backed by experts from many fields, specialises in high-risk pregnancies. It's worth noting that the majority of women identified with high-risk problems go on to have a normal pregnancy and birth.

Foetal Medicine:

Prenatal diagnosis has improved significantly at Fortis La Femme as a result of technical improvements. The unborn is now treated as a separate patient from the mother in foetal medicine.

Infertility and IVF:

This cutting-edge fertility centre in Bangalore leaves no stone unturned in terms of technology and methods to provide you with world-class infertility treatment.

Paediatrics and Neonatology:

Leading paediatricians and neonatologists collaborate to better understand, prevent, and treat the majority of paediatric illnesses. (3).

OBSERVATIONAL REPORT

The following is the Observational Report of Fortis La Femme, describing the structure and various departments in the Hospital in detail.

HOSPITAL STRUCTURE

Table 1: Floor wise structure of the Hospital

FLOOR	DEPARTMENTS
Ground Floor	• Reception • Lobby • Emergency • Pediatric, orthopedics and urology OPD • Radiology • Mamma Mia • Baby store • Board room • OP & IP Pharmacy • Cafeteria • Admissions/IP billing/ TPA Desk • Administration • EPBAX
First Floor	• Outpatient Department • Consultation rooms • Radiology • Sample collection • Milk bank • Covid ward
Second Floor	• IP reception • Nursing station • Inpatient Ward (All category for rooms) • Doctors rest room • Janitor room • Baby bathroom • Crash cart • Storage area
Third Floor	• Triage • NICU • LDR • OT • PACU • Covid LDR • MICU

Basement	• Security • CCTV Surveillance room • CSSD • Housekeeping • Medical Records • Dietetics • F & B (including Kitchen) • Laboratory • Purchases & Stores • Powerhouse • Blood Store • HT Panel • Pump house • Parking
4 th Floor	• Terrace • Staff Dining • Air Compressors • Water Tanks • Lift Control Room

MEDICAL ADMINISTRATION

Medical Superintendent: Dr. Monika

Outpatient Department

Person Interviewed: Mr. Pradeep (Manager), Swetha (Supervisor), Nancy (Receptionist)

Functions Of OPD:

- Maintain disease control through early detection and treatment.
- Investigate and screen the situation to see if hospitalization is necessary.
- Make screening and investigations for hospital admission easier.
- Provide ambulatory therapy that is effective.
- Provide released patients with follow-up treatment and rehabilitation.

Location:

1st floor – Genealogy and Obstetrics, Endocrinology, Oncology, Cosmetic Surgery, General Surgery, Urology, Urogynecology, Fetal Medicine, Radiology, Clinical Nutrition and Dietetics

- Total consultation room- 9
- Radiology department- Ultrasound, Breast scan, Abdomen Pelvis pregnancy scan, NT scan.
- Laboratory services- SRL Diagnostics
- Sample collection room
- Procedure room
- Nursing Station

Ground floor: Pediatrics, Orthopedics, Cardiology, General Surgery, General Medicine

- Radiology department: X-ray
- Dexa Scan (Bone Densitometry)

Inhouse Doctors:

- Dr. Prathima Reddy
- Dr. Aruna Murlidharan
- Dr. Geeth Monnappa
- Dr. Deepthi Ashwin
- Dr. Niveditha
- Dr. Priya Chinnappa
- Dr. Sreenath Manikanti
- Dr Marie Shalini
- Dr. Pradeep
- Dr. Nagesh
- Dr. Madhusudan

Process Flow:

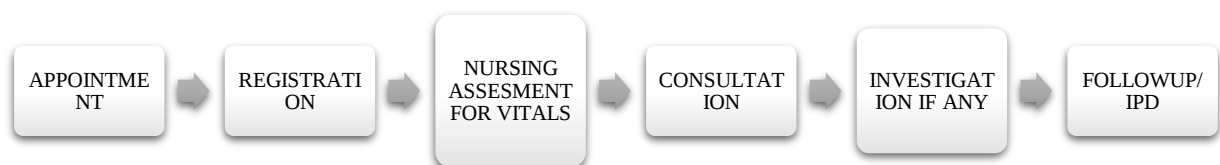


Fig 1: Process flow of the OPD

Inpatient Department

Person Interviewed: Dr. Monika, Mrs. Angel Priya, Sr Prabhavati,

Functions:

- To provide the highest possible quality of medical and nursing care for the patients.
- To provide necessary equipment, essential drugs and all other stores required for patient in an organized manner.
- To furnish most desirable environment substituting as temporary home for the patients.
- To provide facilities to meet the needs of the visitors and attendants.

Location: 2nd and 3rd floor

Sections:

Census Beds:

Table 2: Census Beds

Ward	Beds
Presidential Suite	1
Suite	2
Deluxe	2
Single Room	12
Twin Sharing	12
General Ward	3
NICU	12
MICU	5

Non-Census Beds:

Table 3: Non-Census Beds

Ward	Beds
Triage	5
LDR	3
OT	3
PACU	3
ER	3

Staffing:

- Senior Doctors
- Junior Doctors
- Nurse In charge
- Nursing Staff
- Anesthesia team

Allied Staff:

- Dietician
- Physiotherapist
- Housekeeping
- Ward secretary
- Security
- Pantry

Equipment:

- Crash cart
- Dressing Trolley
- Procedure Trolley
- Defibrillator
- Sterilizer
- Cardiac Monitor
- Syringe Pump
- Infusion Pump
- Breast Pump
- Glucometer

Audits:

- Panic Value Audit
- Medication Audit
- Narcotic Audit
- Prescription Audit
- HAPU (Hospital Acquired Pressured Ulcer) Audit
- Falls Audit
- Patient Identification Audit
- IPSG Audit

Process Flow:

Fig 2: Process flow of the IPD

Biomedical waste management comes under medical administration.

Central Sterile Supply Department

CSSD plays an important role in providing the items required to deliver quality patient care. CSSD is the heart of hospital and the most important unit of clinical support services. It is a centralized unit for the sterilization and reprocessing of the reusable items and equipment.

The main *functions* of CSSD are:

- Cleaning and drying
- Assembly
- Packing
- Sterilizing
- Storing
- Distribution

Location: Basement.

Nursing Department

Person Interviewed: Sr Sandhya, Sr Prabhavati, Sr Glady

A nurse's primary responsibility is to advocate for and care for patients, as well as to assist them through health and sickness. Sr. Sandhya, the chief of nursing at Fortis La Femme, is the driving force behind the organisation. Nursing service and nursing education are both part of the nursing department. The nursing service's main goal is to deliver comprehensive, safe, effective, and well-organized nursing care. Presently, the total number of nurses in the hospital is 42.

Functions:

The key *functions* of the nursing staff include,

- Record medical history and symptoms.
- Taking care of Covid patients in covid isolation ward.
- Covid sample collection.
- Work with teams to plan patient care.
- Advocate for patients' health and well-being.
- Monitor patient health and document signs and symptoms.
- Assist with the administration of drugs and therapies.
- Be able to operate medical equipment.
- Conduct diagnostic tests.
- Inform patients on how to manage their diseases.
- Offer patients assistance and guidance.
- Covid-19 vaccination.
- Nursing education.

Uplifting the standard of nursing by in service education and refresher courses etc., are included in the functions of this department.

Organogram Of Nursing Department:

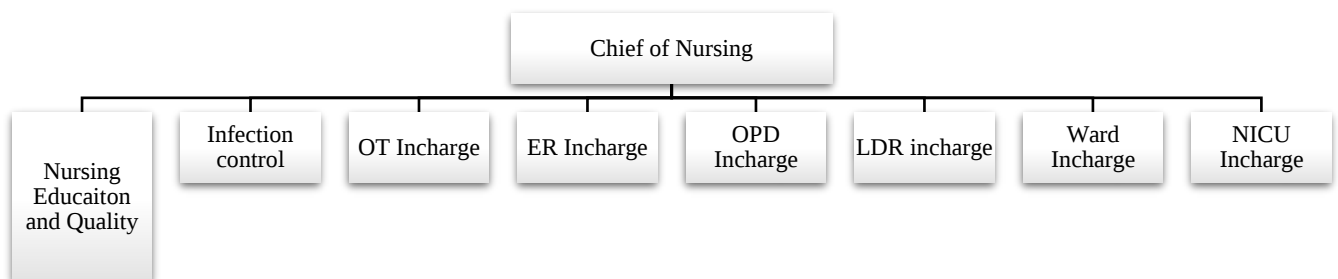


Fig 3: Organogram of Nursing department

The Nursing Ratio for the different IPD departments is as follows,

- Ward- 1:6
- NICU (babies on ventilator) – 1:1
- NICU (C-PAP babies) – 1:2
- NICU (stable babies) – 1:3

Challenges:

- Manpower attrition

Laboratory Services

In Fortis La Femme, the laboratory services are outsourced. It has been operated by SRL Diagnostics.

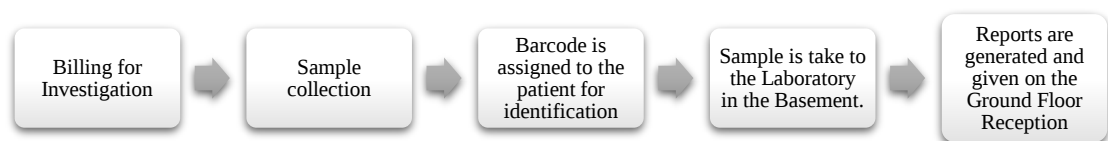
Process Flow:

Fig: 4 Process flow of Laboratory Services

Services Provided:

- Biochemistry Routine
- Microbiology
- Serology
- Hematology
- Histopathology

Common Investigations:

- 24 hrs. Urine/ Spot Urine
- Biochemistry Profile
- Biochemistry Special
- Bone Profile 1
- Drug test
- Body Fluids
- Blood Grouping, Typing, and Ancillary Test

Management Codes

Table 4: Management codes of the Hospital

CODES	
Code Orange	Hazardous material spill
Code Yellow	Internal or external disaster
Code Black	Bomb threat
Code Purple	Violence
Code Pink	Child Abduction
Code Blue	Cardiac or medical emergencies
Code Red	Fire

Outpatient And Inpatient Pharmacy

Person Interviewed: Mrs. Raga (Pharmacy In charge)

Location: Ground floor

Functions:

- Selection of reliable suppliers & negotiation (CBU & Non CBU).
- Purchase of drugs according to the drug formulary of the hospital.
- Making good receipt notes, storing, and dispensing of Drugs.
- Maintaining the re-order quantities.
- Keep a track of expired products and return to the vendors on time.
- Make sure the inventory levels are minimal.
- Quality control of purchased and manufactured products.
- Update the drugs formulary time to time.
- Maintains FIFO methodology.

Functions Of A Hospital Pharmacist

- Providing and assessing pharmaceutical services
- To devise a strategy for hospital pharmacy management.
- Establishing a line of communication between administrative officials and medical doctors.
- Assessing the department's needs and enforcing rules and processes for the recruitment of appropriate and qualified personnel.
- To develop and maintain an effective system of clinical and administrative records and reports.

Challenges:

- Procurement of Emergency medication.
- Difficulty with manual prescriptions.

NON-MEDICAL ADMINISTRATION

Head: Mr. Rithesh

Location: Basement

Departments Under Non-Medical Administration:

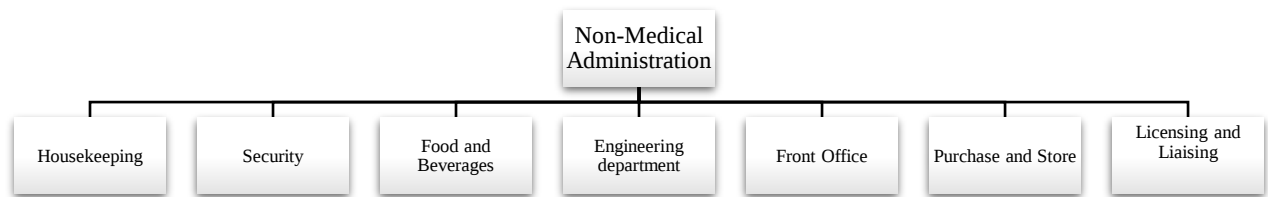


Fig: 5 Non-Medical Administration departments

Additional Patient Care Services

Fortis La Femme Bengaluru considers the ease of patients. The priority of the institution is medical health. However, value-added services are also provided by the Hospital.

Mamma Mia-India's first exclusive service that provides overall care and information to parents from the time of conception to parenthood. The maternity service includes fitness and wellness solutions for expecting and new mothers. The program includes maternity counseling, fitness sessions, pregnancy navigator workshops, prenatal massage, reflexology, birth preparation classes, baby care sessions, toddler care, and more.

Blood Storage- Blood storage is an essential service at La Femme caters to all elective and emergency surgeries. The hospital has tie up with TTK blood bank services for all their need for blood products. The common products are kept at the storage unit of the hospital for other requirements the same is organized from TTK in advance.

Milk Bank-At Fortis La Femme Bengaluru, Karnataka's very first milk bank was introduced in October 2017. Amaara Human Milk Bank is the only not for profit Human Breast milk bank in Karnataka.

Cafeteria-To serve nutritious and hygienic food to patients and visitors, the hospital has set up a cafeteria inside the premises. The cafeteria caters to all 24x7.

Parking space: The massive campus of Fortis La Femme provides sufficient space for parking for patients and visitors & staff. Additionally, valet services are also provided for the convenience of the patients.

Baby Shop-The hospital has also allocated space for a reputed brand baby shop.

PROJECT REPORT

Study of the End-to-End Process of the Conversion of Outpatient to Inpatient Department

Abstract: *The objective of the study is to analyze the process of data capturing by OPD staff followed by the analysis of the OP to IP conversion and observe the process flaws in the system. The purpose of this study is to do the process mapping of outpatient to inpatient admission process. This study helps in identifying the process gaps in the entire process if any and suggest improvements, which eventually helps in the improvement in the quality and revenue enhancement of the department. This descriptive cross-sectional study design was used involving a retrospective observation and record review. The name of the hospital is Fortis La Femme, Bangalore. The sample size is 2000 patients records. The study has raised several issues regarding the variation in OPD to IPD conversion data and Estimated Delivery Date data when compared with the various sources from the Hospital. The findings should be useful to hospital for its future improvements.*

Keywords: *Admissions, Outpatient department, Inpatient department, Outpatient to Inpatient conversion, Estimated Delivery Date*

Introduction

Hospitals are a high-cost enterprise, both in terms of capital and operating expenses. Furthermore, increased competition and restrictions are making the healthcare industry even more challenging. It is critical for a hospital business manager to keep a careful eye on the hospital's financial performance.

OPD is the first touch point of the patients. They come to the hospital allude to a specialist, get a few tests done or buy drugs. On the other hand, IPD patients are those who are admitted in the hospital. It can for different reasons like surgery, broad testing, seriously therapeutic condition etc. There are times when OPD patients are advised by the specialist to get admitted as well. The distinction between inpatient and outpatient treatment is the length of time a patient is required to stay in the institution. Inpatient treatment necessitates an overnight stay in the hospital. Patients must spend at least one night in the medical facility where they are treated, under the care of a nurse or doctor throughout this period.

Outpatient to Inpatient conversion process is a very sensitive and a complicated one. It is a long process which starts from appointment to discharge. The key factor in this process is maintaining the accurate data for patients and follow-up with the patients advised for admission and surgeries. This helps the hospital in making the right decision and ways to keep up with the financial performance of the hospital.

Literature Review

Hospitals have two major difficulties to remain profitable. First and foremost, they must strive tirelessly to attract new patients to their facility. The second, and most essential, goal is to generate as much income as possible from each patient visit. The second one has a major impact on both the top and bottom lines, but it is also the least well-understood process due to its inherent constraints. Typical recommended tests in hospital OPDs range from 20% to 50%, depending on the specialization and month of the year. You should look at how many of these are being lost to the competition.

For multi-specialty hospitals, the outpatient department (OPD) serves as the initial point of contact for patients. Patients can utilize pharmacy, diagnostics, or IP services inside the hospital or from other providers outside based on the therapy recommended on OPD records (usually prescriptions). Unfortunately, given the present set of instruments accessible to hospitals, they are unable to measure this leakage properly and consistently. Although hospitals have a good understanding of who visits their pharmacy, lab, and admissions, they have no idea who was recommended to do one of these but opted to go elsewhere for satisfaction. They could readily assess this if their OPD records become digitized in any way. However, this does not occur, resulting in the consequences. What they really need is for their OPD records to be digitized. The only alternative accessible to hospitals is to use an electronic medical record (EMR), which is highly expensive in terms of allocating resources or the expense of a doctor's time for electronic entry(4).

Currently existing EHR services can digitize OPD records at a low cost. To cut costs, this approach employs artificial intelligence technologies. Patients receive immediate benefits from digitalization as well. Because hospitals are already overcrowded, the approach requires little hospital staff training or substantial changes in processes. EHR assists hospitals in better understanding their OPD patients and flow, as well as leakage assessment and analysis. EHR will also employ artificial intelligence to keep in touch with patients during their therapy, resulting in increased persistence. This persistence aids in the conversion of OP to IP(4).

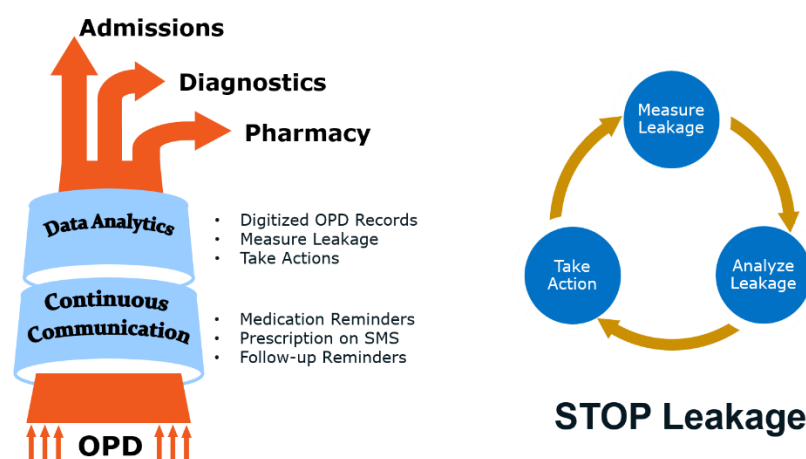


Fig 6: OPD TO IPD, Diagnostic and Pharmacy conversion and stoppage of leakage

Both the medical practitioner and the patients benefit from a solid medical record. The treating doctor's ability to appropriately document the patient's therapy is essential. Keeping medical records has evolved into an art form. Most medical malpractice lawsuits are dismissed based on the quality of the medical records. The doctor's sole way of proving that the therapy was performed appropriately is to keep a record. In many cases, medical records are the only credible source of information. They have a far higher chance of being correct than memory. The management and preservation of medical records in India presents a rather dismal picture. Despite considerable efforts at the national and international levels, the basic health care needs of the developing world's population remain unmet. Due to a lack of fundamental health data, creating and implementing a justification for allocating limited resources available for patient treatment and disease prevention is challenging. The goal of this research is to identify and evaluate the present processes and procedures used in MRD among medical records, as well as to assess the level of conformance of MRD processes to NABH standards in a Multi Super Specialty, Secondary Care Hospital in the National Capital Region. A total of 350 retrospective and current medical data were examined and analyzed for this study. The Medical Records Department of a Multi Super Specialty, Secondary Care Hospital in the National Capital Region was chosen as the research area. The research was descriptive and observational. The study was conducted from December 26, 2016, to March 31, 2017. The primary data was gathered by direct observation and a retrospective examination of papers held by the medical records department.

The hospital has released an extensive medical records handbook that includes the scope, objective, hierarchy chart, job description, rules, procedures, and processes. The MRD has a well-documented medical record flow mechanism, however while examining the flow of patient records from November 2016 to February 2017, only 276 files were received at MRD in November 2016, out of a total of 278 patients released, and 0.72 percent of files were not received. Furthermore, 71 patients (23.67 percent) needed over 31 days to obtain files in MRD. Only 237 files were received in MRD out of 286 patients released in January 2017, compared to 10.14 percent files not received. Furthermore, 28 patients (9.80 percent) needed over 31 days to obtain files in MRD. Only 206 files were received at MRD in February 2017, out of 268 patients released, and 22.39 percent of files were still missing as of March 11, 2017. According to the findings of this study, there is no effective mechanism in place to monitor/track files from the ward/billing department to the MRD once the patient has been released.(5)

Fairview Health Services produced a research manual on research in electronic medical records, with the goal of providing recommendations for its usage in research. To maximize safety and quality of care, the handbook said that healthcare practitioners should be informed of all treatments and drugs to which a patient is exposed. As a result, researchers include information in medical records that allows a healthcare practitioner to fairly identify research workers and contact them for further information, and the Medicare criteria for study documentation are satisfied. According to the study, researchers must document or begin research efforts that are within their area of practice, and more information is recommended(6).

Another study by Randall D Cebul discovered that EHR increases the quality of diabetes care at Better Health Greater Cleveland. Physician practices that utilize electronic health records (EHR) had much more success and progress in meeting diabetes treatment standards and outcomes than practices that used paper records, according to the study. Several figures were given to support the results, including the fact that about 51% of patients in EHR practices got therapy that fulfilled all authorized requirements, whereas just 7% of patients in paper-based clinics received the same level of care. EHR patients got 35 percent higher care standards after accounting for variations in patient characteristics between EHR and paper-based practices.

Patients with paper-based practices accounted for less than 16 percent of the total. The adjusted disparity for EHR practices was 15% larger when patient differences were taken into consideration. Nearly 44% of EHR patients fulfilled at least 4 out of 5 diabetic outcome criteria(7).

Randolph C. Barrows and Paul D. Clayton released another article on privacy, confidentiality, and electronic medical records (EMRs). The report emphasizes the need of increased electronic access to health information for industry-wide initiatives to improve health care quality and lower costs. However, it raises worries about a higher danger of health-care participants losing their privacy. The article examines the competing goals of EMR accessibility and security, as well as the technological and nontechnical elements that make up a viable security solution(8).

According to a research done between 2003 and 2010, 237 hospitals in the United States changed their status from nonprofit to for-profit. This conversion was connected to better future financial health, but it had no effect on the quality of care delivered or mortality rates at the converting hospitals. They also discovered no relationship between for-profit conversion and an increase in Medicare payments or yearly Medicare case volume, or a decline in care delivered to low-income patients or racial or ethnic minorities (9).

A new research on the patient-centered medical home (PCMH), electronic medical records (EMRs), and treatment quality was done by Lisa M. Kern, Alison Edwards, and Rainu Kaushal. The study's objective was to investigate if EMRs were driving the impacts by comparing the quality of care provided by PCMH physicians to that provided by physicians using paper medical records and, separately, to that provided by clinicians using EMRs outside of the PCMH. There were 675 primary care clinicians from 312 practises in the research, as well as 143 489 patients. The PCMH group outperformed both the paper and EHR groups considerably on four of the ten variables: Examinations of the eyes and haemoglobin, diabetic testing, chlamydia screening, and colorectal cancer screening are all recommended. Overall, the PCMH group improved quality by 7% more than the paper group, while the EHR group improved quality by 6% more. (10).

Research Question

- What is the current end-to-end process of OP to IP conversion and what are the key recommendation for the improvement of the process?

Research Objective

- To study the AS IS process of OP to IP conversions
- To identify the process gaps in the OP to IP conversions
- To analyze the process of data capturing by the front office staff (from OPD to expected date of Delivery & surgery and any other admissions as advised)
- To suggest the TO BE process along with improvement areas.

Materials And Methodology

The research methodology adopted for the study comprises of the following:

- **Research design:** Descriptive cross-sectional study

- **Sampling method:** non-probability sampling method
- **Duration of study:** 7th June 2021 to 26th June 2021
- **Sample size:** a) 28 patients for the study of Admissions and surgery
b) 52 patients for the study of Estimated Delivery Date
- **Data collection source:**
 - By observing the end-to-end OPD to IPD process
 - Scrutinize the OPD patient records for the month of April 2021.
 - OPD tracking data, USG tracking data, EDD master sheet, Admission data sheet & OT data sheet.
- **Analysis tool:** Microsoft Excel
- **Analysis used for data collection:** Categorical variable was presented in frequency and in percentage. Additionally, pie chart and bar graph were used for analysis.
- **Inclusion criteria:** All OPD patients who visited the hospital in the month of April 2021.
- **Exclusion criteria:** Patients from Emergency department.

Methodology:

- The research constituted the observation of the AS IS process of the Outpatient and Inpatient Department.
- The study started with 2000 OPD patient's prescription approximately.
- The study was related to advised for admission's, surgery, procedures, and yet to deliver mothers. The patients were shortlisted for the above reasons.
- The data was analyzed using MS Excel. The data was divided into two parts i.e recording the admission & surgery data and Estimated Delivery Dates (EDD) of the expecting mothers.
- The first set of data helped us analyze the Outpatient to Inpatient conversion of the patients advised for admission for medical management and surgeries.
- In the second set of data, we recorded the Estimated Delivery Date of the expecting mothers who had visited Hospital in the month of Apr-2021.

Outpatient To Inpatient – As Is Process

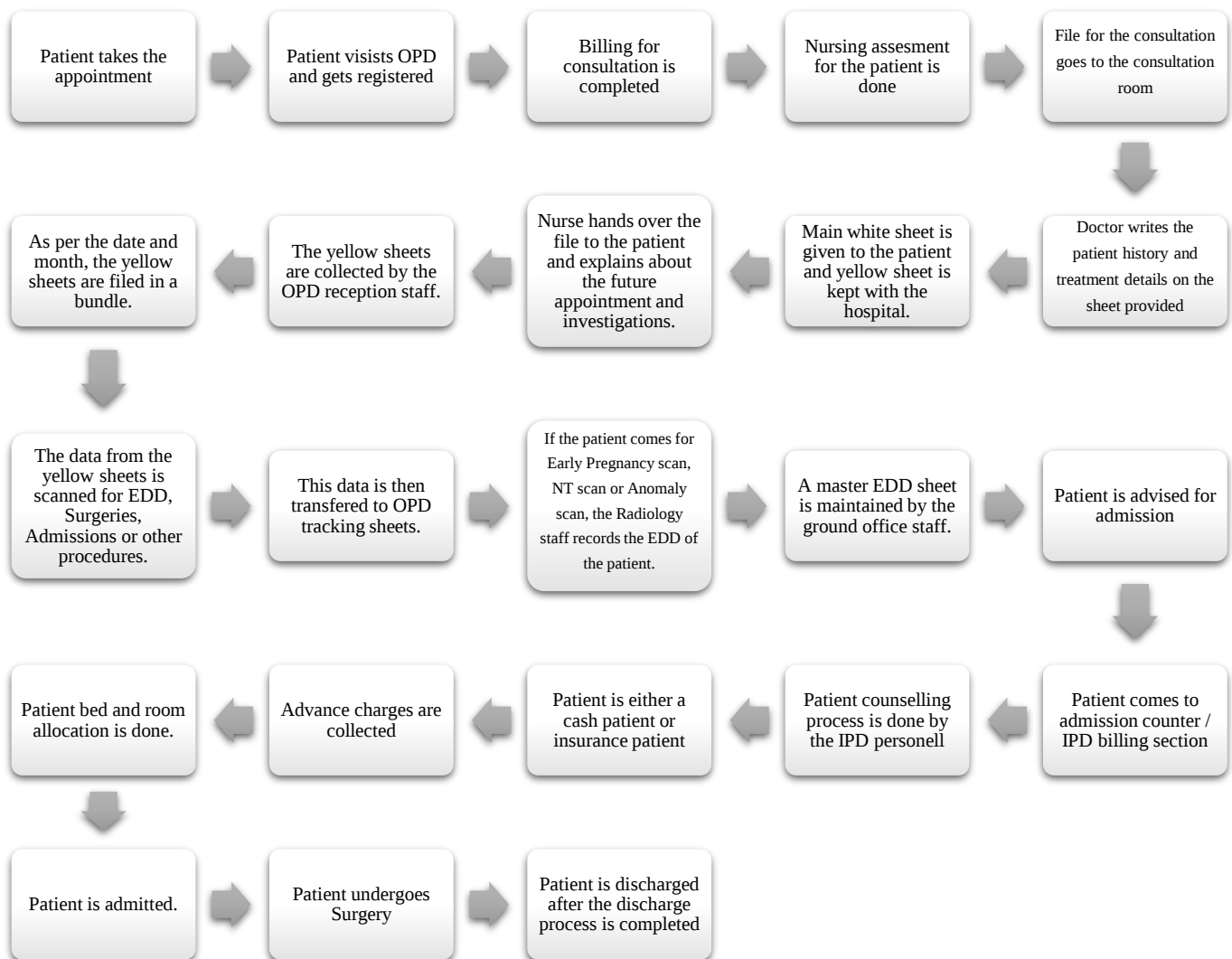


FIG 7: The end-to-end Outpatient to Inpatient conversion process in Fortis La Femme.

Data Analysis for Admissions and Surgeries:

From 2000 OPD sheets, we identified 28 patients who were advised for Admission, Surgery, or other procedures. The data was organized and validated with the Hospital OPD to IPD tracker, Admission data tracker and Hospital OT data Tracker.

TABLE 5: The format was used for analyzing the records of patient advised for admission, surgery & other procedures.

Date of OPD	UHID	Name of Patient	Consulting Doctor	Name of the procedure	Validate with Hospital OPD tracker	Validate with admission data	Validate with OT data	Procedure name	Procedure date	Surgeon

Findings of the study:

Sample size	2000 OPD Prescriptions
Admission advised for surgery & medical management & others	28 (1.4%)

<i>Name of the procedures</i>	<i>Procedures Advised</i>	<i>Procedure Completed</i>
Admission	21%	67%
Surgery	50%	50%
Other Procedures	29%	63%

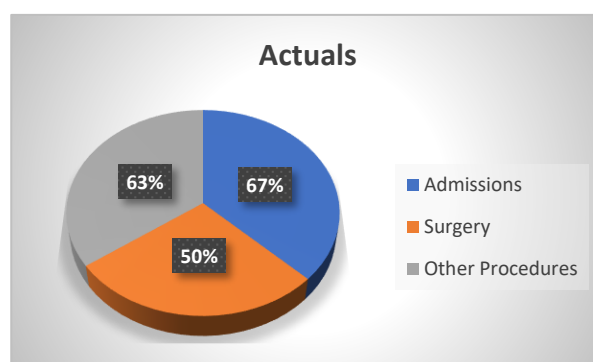
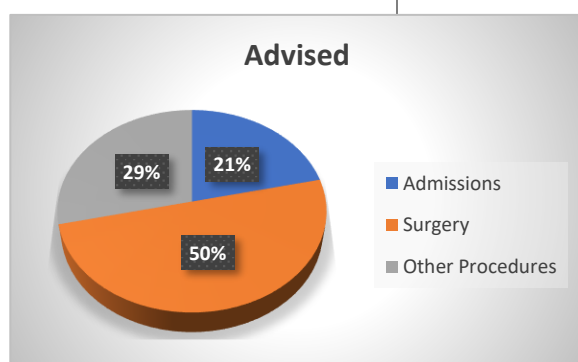


Fig: 8 Advised and Actual patients for Admission and Surgery

Observations:

- Out of the 28 cases it is clearly seen that at least 50% of the patients are advised for surgical procedures and rest 50 % are advised for medical management and any other small procedures.
- Out of the 21% patients advised for Admissions, 67% got admitted.
- Out of the 50% patients advised for surgery, 50% went for the surgeries.
- Out of the 29% patients advised for other procedures, 63% went for the procedure.
- 71% of the research data did not match the OPD tracker data.
- UHIDs of many patients were not mentioned, which makes it difficult to track the unrecorded patient.

Recommendations:

- The patients who did not opt for the procedures should be tracked and followed-up regarding the reasons for the delay in the treatment.
- 50% of the patients did not opt for surgery. After the confirmation with patients, it was found that patients were hesitant to opt for treatment due to the pandemic and insurance delays.
- OPD staff should track 100% of data of the patients advised for admissions for medical management, MTP, phototherapy and other surgeries in the OPD tracker.
- The UHIDs should be in a printed format at the registration counter for the ease of future reference.
- The Prescription format could be changed with introduction of Advice and Investigation in the bottom column (Refer fig: 10).

Data Analysis for The Estimated Delivery Date Data Study:

From 2000 OPD sheets, we identified 52 patients for the study of EDD. The EDD was estimated based on LMP of the patient given on the OPD sheets. To validate our data, we compared it with the Hospital OPD tracking data, Hospital USG data and Hospital Master EDD sheet data.

TABLE 6: The format for analyzing the records of Estimated Delivery Date for the expecting mothers.

Date of OPD	UHID	Name of Patient	Consulting	EDD (Approx.)	Validate with Hospital OPD Data	Validate with hospital USG Data	Validate with hospital EDD Master sheet	Remarks

Findings of the study:

	OPD Tracker	The USG tracker	Master EDD Sheet
Recorded	33%	42%	58%
Not Recorded	67%	58%	42%

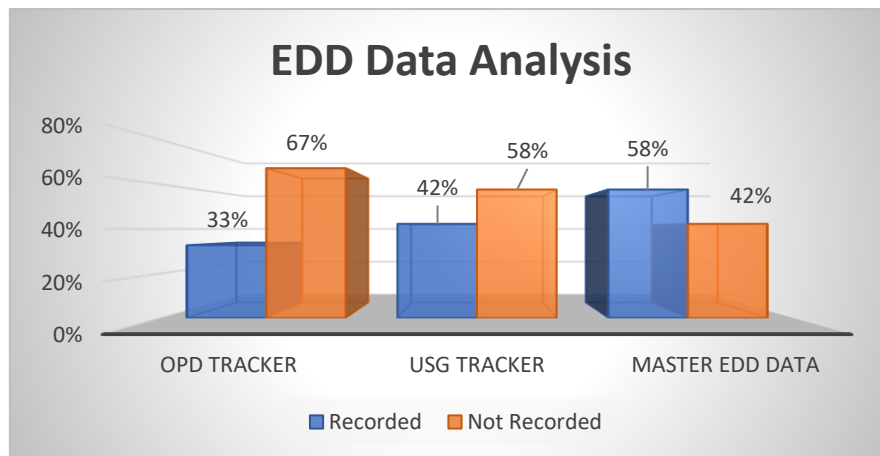


Fig: 9 EDD data tracked on OPD Tracker, USG Tracker and Master EDD Sheet

Observations:

- There is variation of data across the Hospital OPD tracking data, Hospital USG tracking data, and Hospital Master EDD tracking data.
- Out of the 52 patients shortlisted for the EDD data collection, only 33% were tracked by the Hospital OPD tracker.
- Out of the 52 patients shortlisted for the EDD data collection, only 42% were tracked by the Hospital USG tracker.
- Out of the 52 patients shortlisted for the EDD data collection, only 58% were tracked by the Hospital Master EDD sheet.
- The Hospital OPD tracking sheet, Hospital USG sheet and Master EDD tracker has missed out almost 67%, 58% and 42% of the EDD data respectively, which makes it difficult to keep track of the patients who will be visiting hospital in coming months.
- If the patient has already delivered or went for MTP procedure, the Hospital OPD tracker was not updated, which resulted in many unrecorded patients.
- The Estimated Delivery Date (EDD) was not mentioned in 95% of the case papers. AS LMP were mentioned, the EDD was confirmed on LMP basis.
- The Hospital Master EDD sheets tracks most of the EDD data accurately.

Recommendations:

- Only one Master EDD tracking sheet should be maintained to keep track of the expecting mothers.
- UHID No. should be mentioned by the registration staff prior to the patient entering in the consultation room.

- Post the completion of consultation, the reception staff must keep the record of EDDs from the yellow sheet not to miss out on any and it can help in maintaining the up to date OPD data entry.
- If the patient has already delivered or went for MTP procedure, the data in Hospital OPD sheet, USG sheet and Master EDD sheet should be updated.
- A combination of EPM (Electronic Practice Management) and EHR (Electronic Health Records) should be put in use. The system effectively connects IPD/Ward staff to relevant departments which will help the ground office staff to maintain few and accurate records of the patient.

Other Observations:

- In OPD Tracker, the specific names of the blood tests and scans were not mentioned which was gathered from the OPD consultation sheet.
- 10% of the UHID of the patients were not mentioned on the sheets, especially in the Pediatric OPD.
- Patient history was not taken in a systematic format on the prescription,
- Few names of the consulting doctors were missing.

Recommendations:

- The specific names of the Investigations and Scans should be mentioned in the OPD tracking sheets.
- Prescription sheet needs to be redesigned in such a way that it provides the space for LMP & EDD data, investigations, and advice for the patient (Refer to Fig:10).
- A standard terminology like EDD should be used by the consultants, so that the office staff will not miss out on the EDD data.
- As the majority of UHIDs were missing from the Pediatric prescriptions, the same can be rectified.
- The patient's history should be recorded in a systematic format on the prescription paper along with the doctor's name.

FORTIS LA FEMME BANGALORE

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DATE: UHID: GENDER: M/F
NAME: AGE:

Micturition:
Bowel:
Menstrual History:

Obstetric History:

Past Medical History:

Family History:

Allergies:

PRESENTING COMPLAINTS:

ML:
LMP:
EDD:
CONTRACEPTION:
Cx Smear:

ADVICE	
INVESTIGATIONS	

DOCTOR'S NAME / STAMP
(PRINTED)

Fig10:

Redesigned Prescription format suggested for the Hospital.

Conclusion

The study showed that majority of the data in the hospital was not recorded in a centralized manner. It indicates the need for the use of Electronic Health Records (EHR) in Outpatient and Inpatient department. It would help the Hospital to have their accurate repository of patients records, especially about the Estimated Delivery Dates of the expecting mothers. This will help the staff to keep follow-up with the patient and convert these Outpatients to Inpatients, thus increasing the conversion rates and arrest any revenue leakages in the system. Other areas where improvements are needed include the redesigning of the prescription paper which will allow a clear information about the Advice and EDD data of the patient. The Hospital administration can work to improve the above processes to arrest any revenue leakages if any.

Recommendations

The recommendations of this research studies are as follows:

- The patients who did not opt for the procedures should be tracked and followed-up regarding the reasons for the delay in the treatment.
- Only one Master EDD tracking sheet should be maintained to keep track of the expecting mothers.
- A combination of EPM (Electronic Practice Management) and EHR (Electronic Health Records) should be put in use. The system effectively connects IPD/Ward staff to relevant departments which will help the ground office staff to maintain few and accurate records of the patient.
- The specific names of the Investigations and Scans should be mentioned in the OPD tracking sheets.
- The UHIDs should be in a printed format at the registration counter for the ease of future reference.
- Prescription sheet needs to be redesigned in such a way that it provides the space for LMP & EDD data, investigations, and advice for the patient (Refer to Fig:10)

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Annexure:

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Date :			
Patient Name :	Age :	Parity :	Occupation :
UHID No :			
Presenting Complaints		ML	
		LMP	
		Contraception	
		Cx Smear	
Micturition :			
Bowels :			
Menstrual History :			
Obstetric History :			
Past Medical History :		Family History :	
		Allergies	
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Fig: Current prescription format of the Hospital