Internship Training

At

**"Pharmacy audit and gap analysis in a tertiary care hospital"**

By

Ribha Dewangan

PG/20/055

Under the guidance of

Mr Navneet Kumar, Dr Rupsa Banerjee

PGDM (Hospital & Health Management)

2020-2022



International Institute of Health Management Research

New Delhi

Completion of Dissertation from Healthcare Infosystems

The certificate is awarded to

**Ribha Dewangan**

In recognition of having completed his/her Internship in the department of

**Operations Department**

And has successfully completed her Project on

**Pharmacy audit and gap analysis in a tertiary care hospital in India**

From: 4th April to 2nd May

**Sai Preet Bhalke Hospital, Bidar, Karnataka**

She comes across as a committed, sincere & diligent person who has a strong drive & zeal for learning.

We wish her all the best in future endeavours.

Mokshda sharma

**Training & Development**

**Zonal Head-Human Resources**
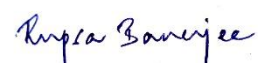
## TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ribha Dewangan** student of PGDM (Hospital and health Management) from International Institute of Health Management Research, New Delhi has undergone internship training at Healthcare Infosystem (Haspatal Direct Programme) from February to April 2022.

This Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfilment of the course requirements.

I wish her all success in all her future endeavours.

*Rupsa Banerjee*

Dr Sumesh Kumar                                        Dr Rupsa Banerjee

Associate Dean,                                            Assistant Professor

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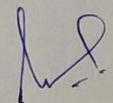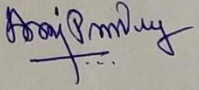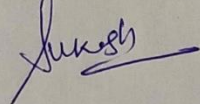
# Certificate of Approval

The following dissertation titled **"Pharmacy audit and gap analysis in a tertiary care hospital in India"** at **Healthcare Infosystem Gurugram** is hereby approved as a certified study in management carried out and presented in a manner satisfactory to warrant its acceptance as a prerequisite for the award of PGDM (Hospital & Health Management) for which it has been submitted. It is understood that by this approval the undersigned does not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approves the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of the dissertation.

Name                                                                Signature

1) Dr. Ankur Kathuria

2) Dr. Anuj Kumar Pandey

3) Dr. Sukesh Bhardwaj

# Certificate from Dissertation Advisory Committee

This is to certify that Ms. Ribha Dewangan, a graduate student of the **PGDM (Hospital & Health Management)** has worked under our guidance and supervision. She is submitting this dissertation title "Detailed Process of Pharmacy audit and gap analysis in Sai Preet Bhalke Hospital, Bidar, Karnataka/Tertiary hospital in India" in partial fulfillment of the requirement for the award of the **PGDM (Hospital & Health Management).**

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

Institute Mentor Name,

Dr. Rupsa Banerjee

Designation-

Assistant Professor

Organization-

IIHMR, Delhi .·

Organization Mentor Name

Mr. Navneet Kumar

Designation-

Programme Director

Organization-

Haspatal Direct Programme

# INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH, NEW DELHI

## CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **Pharmacy audit and gap analysis in tertiary care hospital** and submitted by **Ribha Dewangan  PG/20/055** under the supervision of **Dr Rupsa Banerjee** for award of PGDM (Hospital and Health Management) of the Institute carried out during the period from 2020 to 2022 embodies my original work and has not formed the basis for the award of nay degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institute of higher learning.

Signature

**Healthcare Infosystems**

## TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ribha Dewangan from IIHMR Delhi has completed her internship on the topic of "Pharmacy audit and gap analysis in a tertiary care hospital in India" in the department of Operation from 4$^{th}$ April to 2$^{nd}$ May 2022.

During the above period, her performance was good.

We wish her all the best for her future endeavor.

HR Mokshi Raina

Name and signature

Head Operations

Name and signature

# FEEDBACK FORM

**Name of the student:** Ribha Dewangan

**Name of the organization in which Dissertation Has Been Completed:**
Healthcare Infosystems (Unit Sai Preet Bhalke Vydehi Hospital)

**Area of Dissertation:** Operations Management

**Attendance:** Full attendance (except she has taken 5 days leave for her mother's treatment)

**Objectives achieved:** Satisfactory

**Deliverables:** Satisfactory

**Strengths:** She is a hardworking and she has the ability to complete her task within the deadline. She can bring innovative ideas and a fresh perspective as per the project requirement. I truly appreciated the time and efforts she has put into pharmacy project. She is respectful to the other colleagues and helps others when required. She has made this project possible with her hard work.

**Suggestions for Improvement:** Communication skills

**Suggestions for Institute (course curriculum, industry interaction, placement, alumni):** NA

**Signature of the Officer-in-charge/Organisation Mentor (Dissertation)**

Date:
Place: Bidar, Karnataka

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## CERTIFICATE ON PLAGIARISM CHECK

| Name of Student (in block letter) | Ribha Dewangan | | |
|---|---|---|---|
| Enrollment/Roll No. | PG/20/055 | Batch Year | 2020-2022 |
| Course Specialization (Choose one) | Hospital Management | | |
| Name of Guide/Supervisor | Dr. Rupsa Banerjee | | |
| Title of the Dissertation | Pharmacy audit and gap analysis in a tertiary care hospital in India | | |
| Plagiarism detect software used | "TURNITIN" | | |
| Similar contents acceptable (%) | Up to **15** Percent as per policy | | |
| Total words and % of similar contents Identified | 7% | | |
| Date of validation (DD/MM/YYYY) | 11th July 2022 | | |

Guide/Supervisor

Name:  Dr Rupsa Banerjee

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Student

Name: Ribha Dewangan

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# ACKNOWLEDGEMENT

Dissertation is a golden opportunity for learning and self-development, this was memorable journey in my life. I consider myself fortunate for having been provided with an opportunity to undergo my dissertation training at Healthcare infotech, Gurugram (Haspatal Direct programme).

In this organization I have had the privilege to get to know many people who generously shared their experiences and knowledge with me.

I would like to express my sincere gratitude to Mr Navneet Kumar, Miss Sushma Arya in Department of Operation for their continuous guidance, who in-spite of being busy with their duties, took time to hear and guide me, gave helpful advice and constructive comments throughout the project.

I would like to express my deep gratitude and also very thankful to my mentor   Dr. Rupsa Banerjee (Assistant Professor at IIHMR Delhi) their attention towards my work and helping me, which greatly added to my project. Their valuable inputs made this project possible.

| TOPICS | |
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# ACRONYMS/ABBREVIATIONS

DA: Delegated Act

FMD: Falsified Medicines Directive

FSSAI: Food Safety and Standard Authority of India

GST: Goods and Service Tax

HAI: Hospital Acquired Infection

IPD: Inpatient Department

LASA: Look Alike Sound Alike

OPD: Outpatient Department

OTC: Over the Counter Medicine

PO: Purchase Order

SOPs: Standard Operating Procedures

UAE: United Arab Emirates

USA: United States of America

# INTERNSHIP REPORT

**Introduction:**

Haspatal direct programme is a project which comes under Healthcare Infosystem. Under the network of Eminent Physician, USA. Right now they are presented in 8 countries i.e. United States, UAE, Pakistan, Oman, Saudi Arabia, Bahrain, India, and Germany. Under the banner of Eminent Physicians, Healthcare Infosystems is leading 16successful projects i.e. Haspatal Direct program comes under one of 16 successful projects; it's a Presence across Nation (PAN) project.

**Organizational Profile**

**Haspatal Direct program**-

Haspatal direct programme gives complete healthcare online. It makes the patient's life easier. At Haspatal Remote Healthcare Program, we put the patient first, develop long-term patient-doctor relationships, and provide families with peace of mind through fully integrated mind and body care. With an eye to the future, we are committed to innovating our way of improving the world's health through affordable remote healthcare in many countries.

**Vision**- To ensure quality treatment for patients.

**Mission**- To onboard hospitals to advance clinical and non-clinical solutions which help them build capacities to serve a larger number of patients with better outcome

Eminent physicians having a presence of over three decades introduced Healthcare Infosystems in India. It consists of 16 projects that cover all the aspects of healthcare industry.

Haspatal direct provide facilities the healthcare, they are expert to achieve the goal of serving 50 million patients with the support of their partnering institutions.

**Services provided by Organization-** Haspatal Direct programme provided services as follows:

- Hospital -

    Haspatal Direct Programme helps hospitals in many ways such as; small and medium fundraising easily, increase admissions, better recruitment, front office modernization, centralized OPD with advanced booking, increase the efficiency of billing process, cashless treatment, queue management protocol for outpatient, hassle

free admission, complaint-free housekeeping services, maintain facilities at lower costs and better efficiency, more satisfaction with their management workflow, increase admission through the campaign, increase admission through strong referral network with doctors and hospitals, 3 times profits in-hospital pharmacy.

- Doctors-
  Haspatal Direct Programme helps Doctors with video OPD consultations and clinical OPD consultations at low cost or zero service charges, also give other opinions, doctors also find patients records at Haspatal cloud server with securely stored data, promote videos.
- Patients-
  Haspatal Direct Programme helps Patients quick appointments booked with doctors with their choices, sample collections through near diagnostic centres, Free home delivery services of medicines with discount
- Pharmacy
- Laboratory and Imaging
- Therapists
- Home care
- Counselling

## Departments visited/worked-

- SuccessMD-
  Healthcare Infosystems have 16 currently working programs under it, SuccessMD is one of them. Under this program, Healthcare Infosystems works as a hospital consultancy, where SuccessMD send a team of three assistant managers and a centre manager to the client hospital with audit checklists for all the working departments of the hospital.
- TalentMD-
  TalentMD program has been introduced by Eminent Physicians, the USA in India through its flagship Haspatal Program. With its advanced technology, TalentMD has become highly popular among the healthcare workforce in India for finding suitable positions.
  First time in India, TalentMD has introduced a Suitability Matrix to remove gaps in candidate selection or the mismatches which may lead to quick dissatisfaction on either side. With our own offices in Kerala, Telangana, Punjab, Chandigarh, Delhi and Haryana, we can provide readily available, experienced and fresher candidates for various positions like Doctors, Nurses, Technicians, physiotherapists, dentists, managers, transcriptionists etc. quicker than others.
- KizakuMD-
  It is a software developed and implemented by Healthcare Infosystems for hospitals. In this software, we create tasks for the appointed team for each hospital according to their preferred deadline. It helps us to monitor the performance of the employees as KizakuMD gives scores to them according to the tasks completed. Tasks that are completed before the deadline grants +2 otherwise negative (-ve). In case a task gets deleted by us then it doesn't affect the score of the employee. This

scoring ultimately helps in the appraisal of the employees. KizakuMD also helps us to track the implementation of the tasks that are created by the backend team.

- BookingMD
- WelcomeMD

**Problems and issues and solutions**

- Pharmacy
  - o Streamlining all the stock register
  - o Purchase order streamlining
  - o Stock checking
  - o Make worksheets of prescriptions for follow-up patients and give training to pharmacy staff
  - o Free Home delivery services get started
- Security staff
  - o Given training to the security staff about
    - ▪ Their roles and responsibilities
    - ▪ Warm welcome
    - ▪ Assisting visitors/patient
    - ▪ Personal hygiene and grooming
    - ▪ Grievance reporting
    - ▪ Fire safety
- Laboratory
  - o No food no drink sticker sticks on the refrigerator.
  - o Separate registers of OPD, IPD, insurance, and outsourcing tests of patients.
  - o Ensure emergency on/off switch near or inside a lab.

**Observations/learning-**

- The organization assigned the tasks under the KizakuMD software.
- This software evaluates our performance according to the completion of a task. Timely completed task grant +2 otherwise it gets negative.
- Take immediate action.
- Daily rounds to interact with a patient.
- Take patient feedback and record feedback videos for digital marketing.
- Weekly updates

**Any projects are undertaken other than the dissertation-**

- After the pharmacy project, the organization assigned other projects such as Lab and Imaging centres, referral services, and digital marketing checklists for audit. Each checklist is prepared by a respective organization with time limits. Organization guides to fulfil the checklist.
- The upcoming project campaign for marketing is under process.
  - There are a total of 12 campaigns to attract patients with this campaign.
  - 8 ways to promote marketing.

**Reference-**

Haspatal.Com - Google search [Internet]. Google.com. [cited 2022 Jun 21]. Available from: https://www.google.com/search?q=haspatal.com&oq=&aqs=chrome.5.35i39i362l8.8792141j 0j15&sourceid=chrome&ie=UTF-8

<p style="text-align:center"><strong>Dissertation Report</strong></p>

**Abstract:-**

**Background:** The important concern of this pharmacy audit is to find gaps and loopholes that occur in the pharmacy and their main focus is to improve the proper functioning of the pharmacy and meet the actual need that helped to increase the sales and revenue of the hospital.

**Methods:** Through the observation and interview method primary data should be collected, cross-sectional study was conducted on Healthcare Infosystem, Gurugram from $2^{nd}$ February to $2^{nd}$ May 2022, study variables are Pharmacy Storage, Manpower, Store, Sales and Purchase help in formulating questionnaire. These variables help to ask direct questions to the pharmacy in charge and staff.

**Results:** The result is focused on evaluating the present efficiency of In-Hospital Pharmacy the hospital, finding operational flaws if any, and suggesting measures to improve the performance of the pharmacy. In the discussion, some action plans are to be implemented for proper and better functioning of in-hospital pharmacy.

**Conclusion:** after the all-action plans are implemented only remaining thing is to follow up on all action plans, timely auditing helps to improve and smooth running of the in-hospital pharmacy.

**Introduction: -**

An audit is a process of investigating/checking the organization. To find their gaps and loopholes, analysis their needs and fulfil the needs of the department. Inspection auditors collect evidence by inspecting physical assets, records, or documents, Observation, External confirmation, Recalculation, Re-performance, Analytical procedures, and Inquiry. The audit helps in the detection and prevention of errors and frauds. The audit helps in maintaining the records and verification of books of the books of accounts. The independent opinion of the auditor is extracted through auditing which is extremely essential for the management of the company/organization.

This project defines Pharmacy guidelines and services in a hospital.

The Pharmacy audits will be done to avoid malpractice and for proper storage. As certain medicines are worked at certain temperatures. If we don't maintain it then we lapse their potential of medicine. Only pharmacy peoples know the rule and regulations to keep medicine safe. Now a day's pharmacists are not available or hired in the pharmacy, people are taking licences on rent now hired by the pharmacy people/owner, they are just getting a licence on rent. There are so many pharmacies that are working without a licence or with an expired licence. It's mandatory to give medicine or to dispense medicine to seeing prescriptions by doctors. All these should be checked by the auditors.

1- Medicine should be given after seeing the patient's valid prescription,
2- The billing register should be maintained,

3- Inventory should be up to date,
4- Maintain expiry and near expiry details
5- Medicines should not be stored with foods and other items.

Duration for Audit

Onsite pharmacy audits take not more than 60 days and desktop audits take approx 90 days to close, depending on the circumstances and outlying discrepancies.

If pharmacies do not comply with regulations in the auditing process, they may face a penalty fee, corrective action to be taken, or even suspension. If you own a pharmacy, you may expect to have pharmacy compliance audits run from time to time. There are many factors in pharmacy audits that you need to know to meet guidelines to keep the pharmacy intact.

**Rationale-**

This study is aiming to conduct a gap analysis through an audit, which will help to find out the problem and process failure in the in-hospital pharmacy. This analysis will help to find out the solution which can rectify the problem and can induce smooth running of the in-hospital pharmacy as well as work into the revenue system of the hospital.

**Literature Review-**

Urszula Religioni, **"**Hospital Audit as a Useful Tool in the Process of Introducing Falsified Medicines Directive (FMD) into Hospital Pharmacy Settings-A Pilot Study" 2016

The European Union established the Falsified Medicines Directive (FMD). Furthermore, in early 2016, a Delegated Act (DA) was published for FMD. The key objective is to enumerate the importance of external audit in the reference to executing recent provisions provided by the FMD in the environment of secondary care. Through externally, privately audits were held by the authorised companies in 3 polish hospital pharmacies. Every audit composed of a mixture of supervision, secondary data analysis, and specialist interviews with the use of an independently designed authorial Diagnostic Questionnaire. these questionnaires combined hospital information related to the procedure of dispensing, drug distribution process in the hospital, IT system, data of access control drug usage and the procedure used to make injections and administration of harmful drugs.  All data were subjected to qualitative analysis, to generate meaningful information through inductive gist. Studied conducted in polish hospitals found only one dispensing location that has the potential to be a primary authentication area. During the study, at the time of auditing, the hospital found that an automated drug dispensing system and dose unit were not identified. In the hospital, wards had a separate place within the department dedicated to drug storage directly supervised by senior nursing staff. An electronic indenting system was not available. Left/unused drugs are re-dispensed to other hospitals department or sold to different institutes. In addition, for the admitted patient to the hospital, the pharmacists prepared the parenteral nutrition and chemotherapeutic drugs in one of the hospital pharmacies. Introducing new regulations for everyday settings, and external audits may be beneficial in

the course. But, similar steps should be supplied before the final implementation of special services. To summarize, FMD may affect several hospital departments.

Rivik siden, "survey to assess the role of pharmacy technicians and non-pharmacist staff in the operation of research pharmacies" 2014

This survey is conducted to assess the trends and innovation action used by pharmacy and non-pharmacy staff in research pharmacy settings. This survey was conducted online in which 2 institutes involved first American Society of Health-System Pharmacists and second University Health-System Consortium. Survey related to the examination of drugs, research and practice. These data were collected from the dedicated staff of the pharmacy department in the key areas of operational research pharmacy. In the data analysis, 51 institutions were included in the response to the survey. Overall, the distribution of assigned responsibility for most of the assessed research pharmacy tasks reflected the traditional division of pharmacist and technician duties, with technicians only performing tasks subject to pharmacist checks or pharmacists completing tasks. Area focusing on monitoring, auditing and inventory control. Only half institutes involving technicians. Some institutes involved non-pharmacist staff in the survey reported.

**Key Research Questions and Objectives.**

- **Key Research Question-**
  - What is the operational status of the pharmacy in tertiary care hospital?
  - What are the gaps in functioning of the pharmacy in tertiary care hospital?

- **Objective-**
  - To conduct the gap analysis of in-hospital pharmacy.
  - To take corrective actions plan for better functioning and improve the performance of in-hospital pharmacy.

**Methodology –**

- Study design- Qualitative Cross-sectional Study Design
- Study setting – Haspatal Direct Programme comes under Healthcare Infosystem and they are currently runs in Karnataka.
- Duration of study- 2nd February to 2nd May 2022
- Study variables –
  - Pharmacy Set-up
  - Pharmacy Manpower
  - Pharmacy Display
  - Pharmacy Storage
  - Pharmacy Sales
  - Pharmacy Purchases
  - Growth opportunities utilization

- Method Of Data Collection- Primary data collection
    - Data were collected by observational and interview method, questions were already prepared by a respective organization which is related to pharmacy set-up, manpower, display, storage, sales, purchase, and growth opportunities utilization in which questionnaire directly asked to Pharmacy In-charge and their staff.
- Data collection tool- Questionnaire
    - There is a total of 144 questionnaires in the checklist, divided into different variables- in pharmacy set-up, there are 36 questions, manpower 11 questions, in-display only see the arrangement of shelves and racks, in storage 60 questions, in sales 18 questions and in purchase 19 questions are there.

The main purpose of this audit is to find out the gap analysis and loopholes, improve the efficiency, and increase revenue and performance levels through corrective actions plan for In-hospital pharmacies.

The main focused areas/variables are:

- Pharmacy Set-up:

    In Pharmacy set-up- we find out the actual location of the pharmacy in the hospital, License number and validity, staff shifts and shifts responsible staff names, cleaning schedule and their responsible staff, any communication gaps like- glass participation and uses of stickers in glass, patient Q staff, social distancing compliance, functioning, storage of medicine, sufficient lighting or not? connectivity of pharmacy to the hospital like- no. of phones, no. of computers, no. of printers, security camera installation, types of registers maintained in pharmacy, rosters and attendance, and if there any other/more observations this all checklist are helped in auditing the set-up of pharmacy. All questionnaires related to the Pharmacy setup are shown in Figure.1.

- Pharmacy Manpower:

    We can see the sufficiency of manpower in the pharmacy, their documents, regular background check, and scoring of the staff that will help staffs efficiency of the working load and their performance. All questionnaires related to the Pharmacy setup are shown in Figure.2.

- Pharmacy Display:

    On display check all the shelves, and racks and how they arrange the medications in the pharmacy. Also, check for Over the Counter (OTC) medications if they sell. All questionnaires related to the Pharmacy setup are shown in Figure.3.

- Pharmacy Storage:

    The storage audit can be differentiated category-wise, their selves and racks are also differentiated and named accordingly, with separation of Access/High-risk control medications are stored according to government law (double lock and key), LASA and Emergency medication. All questionnaires related to the Pharmacy setup are shown in Figure.3.

- Pharmacy Sales:

   Sales audits are mainly concerned with the revenue of the pharmacy. In which we can focus on the more sales, follow-up of the patient, profit, income sources of pharmacy, as well as staffs efficiency on selling of the products, average time take for one patient etc. All questionnaires related to the Pharmacy setup are shown in Figure.4.

- Pharmacy Purchase:

   Purchase mainly focuses on the inventory part, who is having the responsibility to purchase the Order, how much inventory is ordered in a month, how much time they store inventory, their expiry return or exchange criteria, and the total amount paid in a month for inventory, etc All questionnaire related to Pharmacy setup shown in Figure.5.

- Growth opportunities utilization:

   This part explains all the audit reports with suitable suggestions for the improvement of the hospital pharmacy and how to increase the revenue of the pharmacy.

**Result**

This report is focused on Evaluating the present efficiency of In-Hospital Pharmacy the hospital, finding operational flaws if any, and suggesting the measures to improve the performance of the pharmacy.

For this purpose, we critically audited key functions of the pharmacy namely:

- Pharmacy Set-up
- Pharmacy Manpower
- Pharmacy Display
- Pharmacy Storage
- Pharmacy Purchases
- Pharmacy Sales
- Growth Opportunities Utilization

| S.No | Our Findings | Review |
|------|-------------|--------|
| SOPs | SOP was not maintained and made by the hospital. | From the very beginning, department-wise sop of the hospital should be made so that it can meet the needs of the hospital. |
| Location | The pharmacy unit has been provided with the prime space in the lobby area of the hospital which is suitable for Walk-in, OPD and IPD patients. | The pharmacy is located in a prime area of the hospital where all can buy medicines easily. |
| Legal | The pharmacy works on a shop- | How the parent entity Hospitals, |

| | | |
|---|---|---|
| Structure | in-shop model. It is a different legal entity than the hospital. It is duly registered for GST and has a GST number. GSC: DD0132000001114 | benefits from this entity needs to be explored |
| The Size of the pharmacy is as under: | Width 13Ft 8 Inches<br>Depth 10 Ft 9 Inches<br>Height 09 Ft 5 Inches | The Size of the pharmacy is sufficient from the operational point of view |
| Licenses | The pharmacy is operating under the following licenses:<br>KA-BD1-190823<br>KA-BD1-190824<br>KA-BD1-190825 | Licenses are valid up to 06- April 2025<br>Fssai license not found in pharmacy. |
| Work Shifts is 3 | Morning Shift 8 AM to 4 PM<br>Day Shift 2 PM to 10 PM<br>Night Shift 8 PM to 8 AM | All the staffs work on rotational shifts. |
| Duty Pharmacist Names | Morning Shift- Pharmacy in-charge<br>Day Shift – Day shift staff<br>Night Shift -Not Fixed | Pharmacist availability is very flexible. It needs a Correction |
| Cleaning arrangements | It has been observed sufficient arrangements for cleaning the pharmacy by the hospital housekeeping staff in the morning, evening or on-demand. | Housekeeping staff are also working rotational shifts and they work well. |
| Glass Partition | To minimize the incidents of HAI, the pharmacy is already using a glass partition which is cleaned regularly and is free from bad-looking stickers. | Glass partition help in the prevention of all types of infection. It is necessary to maintain the gap between staff and patients. |
| Queue Management | The pharmacy uses a Queue manager, neither electronic nor physical. | We recommend introducing a pharmacy-specific token system to make it comfortable for the patients. |
| Social Distancing Compliance | The pharmacy staff complies with social distancing guidelines. It is appreciated. | |

| | | |
|---|---|---|
| Home Delivery of Medicine | There is no provision for home delivery of medicine for the hospital OPD/IPD patients. This is limiting pharmacy sales. | The constitution of a home pharmacy unit to increase sales of pharmacy. |
| Storage of medicine | It has been observed to be sufficient with display racks, Controlled storage under lock provision, under counter storage, Temperature controlled storage. | The missing component of storage and display is plastic containers. They are using very few plastic containers, which are not even-numbered. This needs to be improved. We also suggest keeping fast-moving items near the dispensing pharmacist to reduce the dispensing time. |
| Indenting System | It has been observed that the pharmacy is not connected to IPD for indenting through a computerized system. We encourage the use of a computerized indenting system that prevents mistakes. | For IPD patients, the practice of asking the attendants to go and buy the required medicine should be stopped and the medicine requirement must be procured through an indenting system which should be connected to billing. |
| Attendance Register | Did not find an attendance register in the pharmacy. | Advise keeping an attendance register or a biometric system for this purpose. |
| Ageing of Inventory | It has been found that many of the drugs available are nearing their expiry date. | Advise you to accept the drug delivery with long expiry dates to avoid hassles in future. |
| Mandatory HR Documents | It has been found that CVs, Offer letters, appointment letters, job description and salary slips of the pharmacy team are not available with the HR team of a hospital or with the pharmacy itself. | These are mandatory documents which might be needed at the time of inspections. |
| Stock register | It is found that the closing quantity and the closing amount are different. Closing quantity is excess and short and closing amount is in the negative value | |
| Miscellaneous | No formulary list found Purchase order – directly ordered inventory to the vendors, they do not have any proof of inventory order drug list found. | |

| Business Observations | The average IPD pharmacy billing is Rs 7500 per patient. The average OPD pharmacy billing is Rs 400 per patient. Total OPD pharmacy billing is below the national average of 650 per patient. The total of IPD Sales is less than the total of OPD Sales, owing to the low admission rate. Gross Sales Margins are between 5.00 Lakhs to 6.00 lakhs presently. Most of the prescribed medicine is available in stock. Rarely, they need to buy any medicine from outside. Home Delivery of Medicine is not available as a service. Purchase discounts are in line with market trends. | There is a good scope of improvement in pharmacy revenue. |
|---|---|---|

**Discussion –**

1. Hospital's pharmacy unit has been in a prime location, for 100 bedded hospital required space for a pharmacy is 10 sq. ft per bed and the total space required in feet is 169 feet for 100 bedded hospital, here's hospital has sufficient space for a pharmacy, therefore hospital has enough space from the operational point of view.
2. All the pharmacy licenses that are up to date and also attached to a wall show that the pharmacy follows all the guidelines related to the license.
3. There are a total number of 3 rotational work shifts in the hospital, during the duty hours in the morning time, Pharmacy In-charge has a responsibility, at day shift day staff and at night, night staff have responsible and also shift changes weekly.
4. Housekeeping staff regularly cleanse morning and evening time, or if necessary they informed housekeeping staff to clean. Sufficient arrangements for cleaning the pharmacy by the hospital housekeeping staff. For prevention of Hospital-acquired infection, a glass partition is necessary it has been regularly clean by housekeeping staff and pharmacy staff also clean if required.
5. Sometimes glass partition becomes a barrier to communication, here no communication gap was found due to glass partitions and also maintain social distancing.
6. Storage of medicine to be sufficient with display racks, Controlled storage under lock provision, under counter storage, Temperature controlled storage.

7. Duty Roaster needs to be revised to make it suitable for the handover process and came 15 minutes before handover.
8. There is no Queue manager; neither electronic nor physical compliances are used for thermal screening.
9. There is no provision for home delivery of medicine for the hospital OPD/IPD patients. This is limiting pharmacy sales.
10. The missing component of storage and display is plastic containers. They are using very few plastic containers, which are not even-numbered.
11. The pharmacy is not connected to IPD for indenting through a computerized system.
12. The attendance register was not found in the pharmacy. Inventory has been found that many of the drugs available are nearing their expiry date.
13. Documents like- CVs, Offer letters, appointment letters and salary slips of the pharmacy team are not available with the HR team of a hospital or with the pharmacy itself, these are mandatory documents which might be needed at the time of inspections.
14. After the checking of stock, it has been found that the stocks are not exact as mentioned in the list, their values are negative and quantities are either excess or short.
15. The pharmacy does not maintain a formulary list of drugs, and they directly purchased inventory orders from the vendors. From a business point of view, IPD sales are lesser than OPD sales, average billings of OPD and IPD, and gross sales margins are also between 5 lakhs to 6 lakhs, which is not good for the business.

As per observation, the business operations of the pharmacy unit are being managed exceptionally well. Some of the points and action plan mentioned below will help to improve the pharmacy performance significantly.

### Action Plan

- Establish Free Home Delivery of Medicine using inputs from Prescriptions. This should help to increase pharmacy sales by 50 %.
- Create a register / Excel Worksheet of prescriptions with the following fields
  - Date
  - Patient Name
  - Doctor Name
  - Drugs prescribed
  - Period of prescription
  - Purchased Qty for days
  - Pending Purchases
  - Follow update
  - Order booked date and time
  - Order delivered to date and time
  - Checked by

- Arrange Posters within the lobby area for awareness of free home delivery service, Use a maximum of 2 standees, and a video on the entertainment system in the lobby. If needed, some discount coupons may be considered to boost sales.
- Create a list of non-available drugs which are being purchased regularly as prescribed.
- While purchasing, please Issue a small quantity of PO for occasionally used non-available drugs.
- Optimize the purchase order system to purchase the drugs as per the actual requirements.
- Ensure In - stock drug information in a chart available to all doctors.
- Connect Pharmacy to IPD and Billing through indenting system
- Token System- Use Welcome MD to issue tokens to patients to enhance the experience and manage Queues. It is cost-effective.
- Ensure fast-moving medication storage on the counter.
- Pharmacy Attendance Register to be maintained within and out signatures with time.
- Shift Timings to be revised for a sufficient handover process.
- Plastic Containers are to be introduced after proper numbering.
- Pharmacy Stock Register should be verified and signed regularly by a pharmacy in charge.

**Conclusion** –

A pharmacy audit is needed to avoid malpractices with in a hospital set-up.

Typically pharmacy audit should be conducted in a timely manner, within 2 – 3 months, and a desktop audit should be done within 90 days not more than that.

It is mandatory to find out gaps and loopholes and take action plans for better improvement and smooth functioning of in-hospital pharmacies.

We can achieve greater efficiency in a pharmacy set-up by a proper planning implementation programme.

This activity will help to enhance revenue generation. Continuous quality improvement and audit program for smooth running of the in-hospital pharmacy.

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**Instruments**

| S.No | Checklist | S.No | Checklist |
|---|---|---|---|
| | Figure.1: - In-Hospital Pharmacy Store Setup Audit Checklist | | |
| 1 | Floor Area ( Depth / Front / Height ) Inches | 19 | Is the Pharmacy Connected to the: - Computerized Indent system? Number of phones ( landline ) |
| 2 | Pharmacy License Number | 20 | Number of Computers |
| 3 | License Valid up to | 21 | Number of Printers:- Type of Printers |
| 4 | Number of Work shifts:- Shift 1 ( Timings ) Shift 2 ( Timings ) Shift 3 ( Timings ) | 22 | Security Cameras Installed? Inside? Outside? |
| 5 | Duty Pharmacist Name (Shift ) | 23 | Cash Register? |
| 6 | Duty Pharmacists Name (Shift 2 ) | 24 | Controlled Inventory Register? |
| 7 | Duty Pharmacist Name (Shift 3 ) | 25 | Purchase Register? |
| 8 | More Staff in Pharmacy? Name Role Shift | 26 | Purchase Invoice File? |
| 9 | Cleaning Schedule | 27 | Billing POS System? |
| 10 | Who is responsible for Cleaning? | 28 | Bar Coding System? |
| 11 | Glass Partition? | 29 | Bar Code Readers? |
| 12 | Is it clean? | 30 | Received Stamp? |
| 13 | It is using many stickers? | 31 | Sign Board? |
| 14 | Patient Q Manager? | 32 | Attendance Register? |
| 15 | Social Distancing Compliance? | 33 | Dispensing Paper Envelopes? |
| 16 | Functioning as: IPD Pharmacy OPD Pharmacy Home Delivery Pharmacy | 34 | Carry Bags? |
| 17 | Storage of Medicine 1. Display Racks? 2. Controlled Storage? 3. Fast Moving Items? 4. Promotional Racks? 5. Under Counter Storage? 6. Temperature Controlled? 7. Numbered Plastic Containers? 8. All Containers have lids? | 35 | More Observations : |
| 18 | Sufficient Lightings? Day Shift Night Shift | | |

| S.No | Checklist |
|------|-----------|
| Figure.2: - In-Hospital Pharmacy Manpower Audit Checklist |
| 1 | Team Size Total Salary Load ( Ask HR ) |
| 2 | Documents Check CVs of pharmacy team - All? |
| 3 | Appointment Letter - All? <br> Regular Background checks? |
| 4 | Team Environment ( 1-10 ) |
| 5 | Other Observations? |
| 6 | Employee 1 Name <br> Score out of 10 |
| 7 | Employee 2 Name <br> Score out of 10 |
| 8 | Employee 3 Name <br> Score out of 10 |
| 9 | Employee4 Name <br> Score out of 10 |
| 10 | Employee 5 Name <br> Score out of 10 |
| 11 | Employee 6 Name <br> Score out of 10 |
| 12 | Employee 7 Name <br> Score out of 10 |
| 13 | Employee 8 Name <br> Score out of 10 |

| S.No | Storage Categories Checklist | Shelf Stock | | |
|---|---|---|---|---|
| | Figure.3: - In-Hospital Pharmacy Store Storage Audit Checklist | | | |
| 1 | Right Wall Category | | | |
| 2 | Left Wall Category | | | |
| 3 | Opposite Wall Category | | | |
| 4 | Under Main Pharmacy Desk | | | |
| 5 | Temperature Controlled Category | | | |
| 6 | Access Controlled Category | | | |
| 7 | Over Main Pharmacy Desk | | | |
| | Right Wall Category | | | |
| 8 | Right Wall Category - Shelf A Stocks | Full | Shortage | Expired |
| 9 | Right Wall Category - Shelf B Stocks | Full | Shortage | Expired |
| 10 | Right Wall Category - Shelf C Stocks | Full | Shortage | Expired |
| 11 | Right Wall Category - Shelf D Stocks | Full | Shortage | Expired |
| 12 | Right Wall Category - Shelf E Stocks | Full | Shortage | Expired |
| 13 | Right Wall Category - Shelf F Stocks | Full | Shortage | Expired |
| 14 | Total Storage Boxes - in Right Wall – Category | | | |
| 15 | Are all box labels? | | | |
| 16 | Are there any controlled items there? | | | |
| 17 | Are there any Narco items there? | | | |
| 18 | Is the access restricted only to pharmacy staff? | | | |
| 19 | Did you find any date expired items in storage for sale? | | | |
| | Opposite Wall Category | | | |
| 20 | Opposite Wall Category - Shelf A Stocks | Full | Shortage | Expired |
| 21 | Opposite Wall Category - Shelf B Stocks | Full | Shortage | Expired |
| 22 | Opposite Wall Category - Shelf C Stocks | Full | Shortage | Expired |
| 23 | Opposite Wall Category - Shelf D Stocks | Full | Shortage | Expired |
| 24 | Opposite Wall Category - Shelf E Stocks | Full | Shortage | Expired |
| 25 | Opposite Wall Category - Shelf F Stocks | Full | Shortage | Expired |
| 26 | Total Storage Boxes in Opposite Wall – Category | | | |
| 27 | Are all boxes labelled? | | | |
| 28 | Are there any controlled items there? | | | |
| 29 | Are there any Narco items there? | | | |
| 30 | Is the access restricted only to pharmacy staff? | | | |
| 31 | Did you find any date expired items in storage for sale? | | | |
| | Left Wall Category | | | |
| 32 | Left Wall Category - Shelf A Stocks | Full | Shortage | Expired |
| 33 | Left Wall Category - Shelf B Stocks | Full | Shortage | Expired |
| 34 | Left Wall Category - Shelf C Stocks | Full | Shortage | Expired |

| | | Full | Shortage | Expired |
|---|---|---|---|---|
| 35 | Left Wall Category - Shelf D Stocks | Full | Shortage | Expired |
| 36 | Left Wall Category - Shelf E Stocks | Full | Shortage | Expired |
| 37 | Left Wall Category - Shelf F Stocks | Full | Shortage | Expired |
| 38 | Total Storage Boxes - in Left Wall – Category | | | |
| 39 | Are all boxes labelled? | | | |
| 40 | Are there any controlled items there? | | | |
| 41 | Are there any Narco items there? | | | |
| 42 | Is the access restricted only to pharmacy staff? | | | |
| 43 | Did you find any date expired items in storage for sale? | | | |
| Under Main Desk Category | | | | |
| 44 | Under Main Desk Category - Shelf A Stocks | Full | Shortage | Expired |
| 45 | Under Main Desk Category - Shelf B Stocks | Full | Shortage | Expired |
| 46 | Under Main Desk Category - Shelf C Stocks | Full | Shortage | Expired |
| 47 | Under Main Desk Category - Shelf D Stocks | Full | Shortage | Expired |
| 48 | Under Main Desk Category - Shelf E Stocks | Full | Shortage | Expired |
| 49 | Under Main Desk Category - Shelf F Stocks | Full | Shortage | Expired |
| 50 | Total Storage Boxes - in Under Main Desk – Category | | | |
| 51 | Are all boxes labelled? | | | |
| 52 | Are there any controlled items there? | | | |
| 53 | Are there any Narco items there? | | | |
| 54 | Is the access restricted only to pharmacy staff? | | | |
| 55 | Did you find any date expired items in storage for sale? | | | |
| 56 | Temperature Controlled Category Stocks | Full | Shortage | Expired |
| 57 | Access Controlled Category | | | |
| 58 | Did the items available match the register? | | | |
| 59 | Can you give the Variation Percentage? Approx? | | | |
| 60 | OTC Drugs and Items? Stored Where? Are stocks Sufficient? Stocks Aged? | | | |

| S.No | Sales Process Compliance Checklist |
|------|-----------------------------------|
| | Figure.4: - In-Hospital Pharmacy Store Sale Audit Checklist |
| 1 | Sales Process Compliance Average Time Taken per patient? |
| 2 | The average time it takes to read and understand prescriptions? |
| 3 | Maximum Time to dispense? |
| 4 | Billing System Followed –<br>Computerized<br>Manual<br>Both Card UPI Cheque |
| 5 | Are payment Methods Acceptable?<br>Cash<br>Card<br>UPI<br>Cheque |
| 6 | Maximum Number of Patients / Day |
| 7 | Max Counselling time/patient? |
| 8 | Approximate Percentage of bounced orders? |
| 9 | Bouncing Reasons? 1,2,3 |
| 10 | Are Bills issued for every order? |
| 11 | Are Discounts provided? |
| 12 | Discounts Criteria? |
| 13 | Average number of patients receiving discounts ( Per Day ) |
| 14 | Discounts Percentage? |
| 15 | Ordering Flow?<br> OPD<br>IPD<br>Out of Hospital Patients?<br>Home Delivery? |
| 16 | Do patients buy full stocks? |
| 17 | Do patients return any stocks? |
| 18 | How do they pay for returned stocks? |

| S.No | Purchase Process Compliance Checklist |
|------|---------------------------------------|
| Figure.5: - In-Hospital Pharmacy Store Purchase Audit Checklist |
| 1 | Is the hospital issuing Purchase Orders? ( PO ) |
| 2 | Who issues the PO? |
| 3 | Are the purchased bills matched with PO? |
| 4 | Who makes the payment? |
| 5 | Payment Mode?<br>Cash<br>Cheque<br>UPI<br>Bank Transfer |
| 6 | Payment Pattern?<br>Bill By Bill<br>On Account |
| 7 | Account Credit Terms from Vendor? |
| 8 | Is the Vendor charging any incoming freight/transportation charges? |
| 9 | Are the prices cross-checked before ordering? |
| 10 | Are the prices cross-checked after receipt of the invoice? |
| 11 | Total Number of vendors? |
| 12 | A total number of In - state vendors? |
| 13 | A total number of Interstate vendors? |
| 14 | How many main vendors? |
| 15 | Any long-term/bulk buying schemes |
| 16 | Approx value of total inventory? |
| 17 | Approx value of monthly purchases? |
| 18 | Average Number of days taken between PO and Receipt of ordered items? |
| 19 | Maximum Number of days taken between PO and receipt of ordered items? |