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QUALITY ASSURANCE STRATEGIES FOR OPTIMIZING PHARMACY SERVICES IN MULTISPECIALTY HOSPITAL, CHENNAI

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Abstract

In the present Study, the operational process of the pharmacy department and its quality standards were assessed in a multi-speciality hospital at Chennai. The operational efficiency of the hospital pharmacy could be observed and quality standards of the dispensing and inventory process, percentage of wastage of the drugs. It would be assessed to find out whether the standard of the pharmacy services provided by the Hospital. These quality issues are converted into perceptions and opinions are estimated by using a validated questionnaire among the patient and health care professionals like pharmacists and Nurses. The quality gaps arising would be identified and remedial improvement methods would be suggested. The research design of the study is Descriptive research design and the data was primary data collected by questionnaire from the healthcare professionals. The Outcome of the study can offer insights on the Pharmacy's Quality standards to the hospital staff, and it will result in good operational efficiency in the Hospital.

Keywords:

Quality Assessment, Operational Efficiency, Pharmacy, Nurses and Pharmacists

1. INTRODUCTION

The Quality of the hospital depends on the quality of the hospital's pharmacy Services. Quality is measured as a measure of excellence or a State of defect less inventory, dispensing, and counselling of patients by the Effective management of patient Medication. The role of hospital pharmacy seems to be highly important in providing Patient care with high quality. The operational efficiency of the hospital can be improved by using these following measures such as monitoring the workflow process, inventory, rethinking with new ideas and suggestions. Hospital Pharmacy coordinates to all departments in the hospital and their main focus on the service and by offering medications and non- medicated products to all other departments in the hospital. Pharmacy mainly depends on the prescribed medications availability in the hospital. Hospital pharmacy's operations influence all the departments in the hospital.

Hospital quality is important to ensure quality care to the patient's pharmacy plays a very important role in patient care by giving supervised management of medication for the treatment. Needless to say, that the pharmacy operations will influence the patient prognosis to a significant extent. In this scenario studying the quality of the pharmacy services will be a good approach to assess the quality of pharmacy services in relation to quality patient care.

2. LITERATURE REVIEW

Susan G. Poole, et al. (2021) – In this study aimed to evaluating the interventions designed to reduce the rate of dispensing errors and their effectiveness in hospital pharmacy. The Data was collected from various studies used valid data collection tool and analyzed using random effects model. The study concluded that interventions such as appointing trained staff, implementing latest technology resulted in decreased rate dispensing errors in dispensing pharmacy.

Rubia Zafar, Muhammad Liaquat Raza, et al.- emphasized identifying the possibilities of secondary care hospital. The data was collected from three pharmacies with inclusion of inpatient and outpatient prescriptions. The study results where the high dispensing error was observed for injection and certain tablets. The study concluded that regular assessment of LASA drugs can serve as a tool to improve patient safety.

Ingunn Bjornsdottir, et al. (2020) focused on reviewing the paper from 2006-2016 which reported on using simulated patient (SP) methodology for assessment of pharmacy services and interventions and evaluation of their impact in patient department since 2006 and the performance of the pharmacy has been drastically improved.

Hayley Croft, Conor Gilligan, er al (2019) focused on identifying various pharmacy assessment methods which could of use in entry level pharmacy. The finding of the study includes integrated approaches to performance assessment, simulation-based assessment, collection of valid evidence to support assessment decisions t improve pharmacy practices.

Sara Alil, Tariku Shimels, et al. (2019) focused on assessing patient counselling during the time of medication dispensation. Its cross-sectional study and data were collected using a questionnaire, checklist and analyzed using SPSS. The study concluded that most of the patients are counselled properly about the units dies, frequency of administration and duration of the medication.

3. OBJECTIVE

- To analyse the operational process and systems in the pharmacy.
- To Understand the Gap between Operational process and system.
- To develop the quality tool to close the gap between operational process and system.

4. RESEARCH METHODOLOGY

- **Research Design**: Descriptive Research Design.
- **Type of Data:** Qualitative data

4.1 LIMITATION OF THE STUDY

- The period of study was 3 months.

- The finding of the study is based on information provided by the respondents.

4.2 SOURCE OF DATA

This paper is based on Primary data was Collected through structured questionnaire with 5- Likert scale from the healthcare Professionals (Pharmacist, Nurses) who willingness ton response the data.

4.2.1 Sampling Method:

Stratified Random Sampling

- **Sample Size:** Population Size 130 consists of Pharmacists (50) Nurses (80). Sample of the study is determined by sample size determination formula

$$n = pq(Z/E) \quad (1)$$

- **Study Method**: Survey Method

4.2.2 Tools for Analysis:

Analysis of this Study was done with use of MS Excel.

4.2.3 Statistical Tools Used:

Bar chat, Mean deviation, Standard deviation, Weighted average, Pie chart, Correlation, Chi- square.

5. ANALYSIS AND INTERPRETATION

5.1 DESCRIPTIVE ANALYSIS

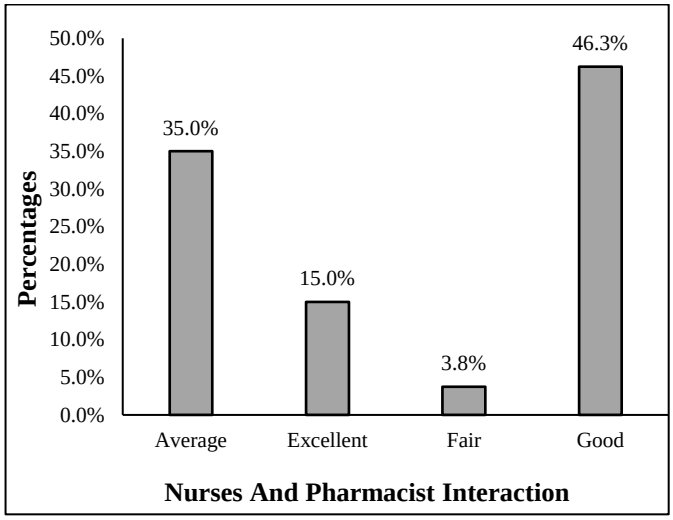

Fig.1. Bar chart of nurses and pharmacist interaction in the study population (N=130)

The Fig.1 shows that nurses and pharmacist interaction in the study 35% of the respondents said that average interaction, 46% of the respondents said that good in interaction, 15% of the respondents said that excellent in interaction, 3.8% of the respondents said that fair in the interaction.

5.2 CHI-SQUARE ANALYSIS BETWEEN DEMOGRAPIC VARIABLES

The Table.1 shows that 0-3 Year of Experience has an excellent respondent of 50%, 40% as good respondent and10% as average respondent. 4-6 Year of Experience has an excellent respondent of 83% and 17% as good respondent. More Than 6 Year of Experience has an excellent respondent of 50% and 50% as good respondent. So, 4–6-year experience people have higher satisfaction level when we compare to other people.

Table.1. Comparison of year of experience across overall satisfaction about pharmacy department (*N*=50)

Year of Experience	Overall Job Satisfaction about Working in the Pharmacy		
	Excellent	Good	Average
0-3Yrs (N=42)	21 (50%)	17 (40.48%)	4 (9.52%)
4-6Yrs (N=6)	5 (83.33%)	1 (16.67%)	0 (0%)
More Than 6 Yrs (N=2)	1 (50%)	1 (50%)	0 (0%)

Table.2. Cluster bar chart of comparison of year of experience across overall satisfaction about Nurses department (*N*=80)

Year of Experience	Overall Satisfaction About Nursing Department					P Value
	Excellent	Good	Fair	Average	Poor	
0-3 (N=68)	14 (20.59%)	23 (33.82%)	14 (20.59%)	14 (20.59%)	3 (4.41%)	0.482
4- 6 (N=8)	1 (12.5%)	5 (62.5%)	0 (0%)	2 (25%)	0 (0%)	
More Than 6 (N=4)	2 (50%)	2 (50%)	0 (0%)	0 (0%)	0 (0%)	

The Table.3, shows that *P* value is > 0.05 means there is no significant difference between year of experience and overall satisfaction of pharmacy department. H0 is accepted. Hence there is no significant between these two variables. Here 4-6 year of experience people have good in satisfaction level with the pharmacy department and more than 6 year of experience people have equal in excellent and good level of satisfaction.

Table.3. Comparison of work area across overall job satisfaction about working in the pharmacy (N=50)

Work Area	Overall Job Satisfaction About Working in The Pharmacy		
	Excellent	Good	Average
Ip Pharmacy(N=32)	15 (46.88%)	13 (40.63%)	4 (12.5%)
Op Pharmacy (N=16)	11 (68.75%)	5 (31.25%)	0 (0%)
Pharmacy Stores(N=2)	1 (50%)	1 (50%)	0 (0%)

The Table.3 shows that Ip Pharmacy has an excellent respondent of 47%,41%asgoodrespondent and 12% as average respondent. Op Pharmacy has an excellent respondent of 69%,

and 31% as good respondent. Pharmacy store has an excellent respondent of 50% and 50% as good respondent. When we compare to all pharmacy staff OP staff is good satisfaction level in working of pharmacy.

5.3 INTERPRETATION

This analysis was taken for finding out the causes which leads to main effect. Main effect is taken as Efficiency of Pharmacy Department and the main causes are Environment, People, Communication, and Methods or Process was taken. The sub-causes like improper communication between the pharmacy and nurses, overcrowding in outside the pharmacy, insufficient space in pharmacy, delay in delivery of emergency and stat drugs to ward from the pharmacy, delay in delivery of drugs due to transport person have lack of training and signage boards are not easily visible for the patient and attenders etc. These sub-causes occurred more during the period of the study**.**

5.4 FINDING

- In descriptive analysis there is improper communication during nurses and pharmacist's interaction.
- There is overcrowding in outside the pharmacy where medicines are distributing to the patients because of insufficient space.
- During this study identified that no proper signage boards are not available, so patient is not able to easily get the drugs from the pharmacy.
- Insufficient space in outside the pharmacy area,
- Delay in delivery of STAT and Emergency drugs from the pharmacy to the concern staffs in inpatient service.
- Lack of training to the pharmacy's transport people is also the reason for delay in delivery of the drugs.
- Healthcare professional Designation impact of designation Employees designation plays a major impact in delivery of quality services in Pharmacy.

5.5 SUGGESTIONS

5.5.1 Implications from the Practices:

- Increase the waiting area space in outside the pharmacy, so patient can get the medicine easily and we easily reduce the overcrowding of patient.
- Hospital can centralize the location of pharmacy so patients & their family members can access easily.
- Implement a greater number of Training & Education for all the employees to avoid delay in delivery of drugs from the pharmacy.
- Improve proper communication system for the health care professionals like nurse and pharmacists.
- Educate about the LASA drugs to the Nurses for the good operations in the department.
- Implement the Signage Boards in appropriate sites for the good pharmacy process.

6. CONCLUSIONS AND IMPLICATIONS FOR FUTURE RESEARCH

The operational process and systems of hospital pharmacy department in a multi-specialty hospital was studied and mapped. This type of mapping could provide an idea for the future researcher who are planning to develop models of patient care and drug treatments.

The quality of the hospital Pharmacy in contributing to overall quality of the hospital cannot be ignored. In the study concluded the operational process of the Pharmacy department and its quality standards were assessed in Apollo Hospital.

The quality assessment of the Pharmacy services using well-defined pre-validated questionnaire among different Health-care Professionals shows that there is no significant different between age, education and designation of healthcare professional respondent's professionals respondent's opinion on various quality parameters

Many studies have not been conducted to convert the scientific aspect of quality of hospital, linking them with quality perceptions of healthcare professionals was converted to a well- defined pre-validated questionnaire to assess the quality of the hospital Pharmacy. This type of study design can be used to design future models of hospital quality assessment.

The concluded study helps us to understand the dimension of quality in the eyes of the different healthcare professionals and how this data could use to further improve the quality in hospital Pharmacy.

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