



## Study on Quality Indicators of Pharmacy in a tertiary Care teaching hospital, Kozhikode

Sujay Mugaloremutt Jayadeva\*, Harshith N, Nashid K P

Department of Health System Management Studies, JSS Academy of Higher Education and Research, Sri Shivarathreeswara Nagara, Mysuru - 570 015, Karnataka, India



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### ABSTRACT

Quality Indicators in pharmacy is essential to address the Prescription errors and other quality-related problems in the pharmacy. Quality indicators can be used, adopted in every aspect and even to the staff. An average of 5000 Prescriptions was analysed for four months in a tertiary care teaching hospital at Kozhikode. Total of 64 staff was chosen for the study which comprised of pharmacists, patients and other staff members. The analysis carried out on the dispensing errors and also the wastage of drugs happening in the pharmacy. There were significant dispensing errors and wastage of drugs happening in the pharmacy which can not only affect the patients but also could bring the financial loss for the pharmacies due to wastage of drugs. The study recommends for the enhancement in the quality of pharmacies as these quality indicators are required for the better public health care and also to avoid the wastage of the drugs causing financial loss to the pharmacies.

### \*Corresponding Author

Name: Sujay Mugaloremutt Jayadeva  
Phone: +919844356060  
Email: [sujay.dhmsms@jssuni.edu.in](mailto:sujay.dhmsms@jssuni.edu.in)

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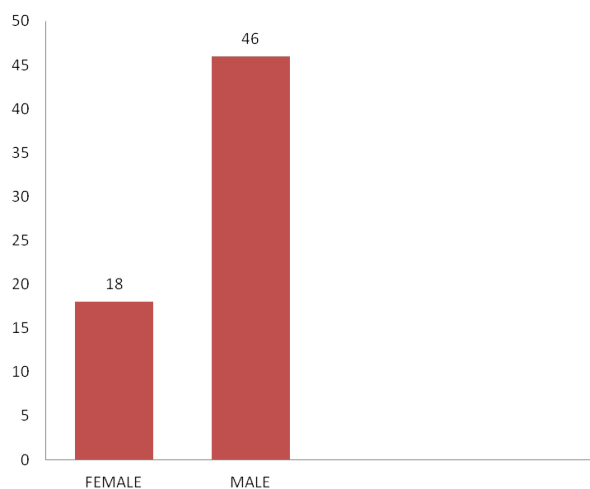
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### INTRODUCTION

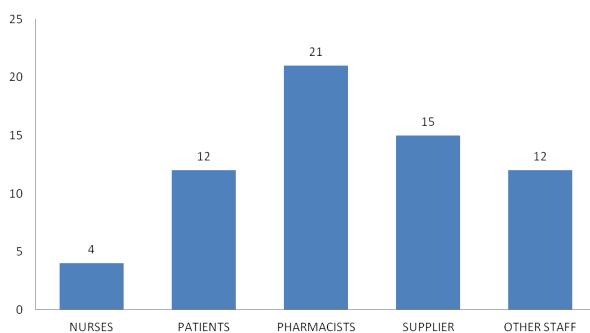
The quality markers for drug store are proposed to furnish general society and wellbeing framework with data about the general nature of drug store care and to assist the world in increasing a superior comprehension of the drug store's effect on quiet results (Mainz, 2004). Quality and quality improvement are multi-dimensional ideas. Quality improvement was defined as 'the joined and continuous endeavours of everybody – human services experts, patients and their families, analysts, payers, organ-

isers and teachers – to roll out the improvements which will prompt better patient results (wellbeing), better framework execution (care) and better proficient turn of events (learning) (Donabedian, 1989). With this definition at the highest of the priority list, five information frameworks are perceived as being engaged with progress, including generalisable scientific proof; specific setting mindfulness; execution estimation; plans for change; and execution of arranged changes (Mainz, 2003). One among these frameworks is execution estimation which includes the use of adjusted estimates which will evaluate the impact of changes in quality after a while (Nembhard *et al.*, 2009). Quality pointers are required to measure execution and are 'quantifiable components of coaching execution that there's proof or accord that it alright could also be utilised to survey the standard, and subsequently change within the quality, of care gave Quality pointers in social welfare address quantifiable parts of important frameworks, procedures and results (Vos *et al.*, 2009). They provide knowledge into the presentation of care suppliers and are utilised to animate continuous improvement of patient consideration (Nau, 2009). Different qual-

ity marker sets are presented during the western world. Among others, these sets are utilised to gauge and improve the character of clinical practice (Nigam *et al.*, 2008). To gauge pharmaceutical consideration because the drug specialist's commitment to the consideration of individuals so on streamlining MEDs utilise and improve wellbeing results, in 2008 a national arrangement useful pointer has been found out for network drug stores within the Netherlands (Schoenmakers *et al.*, 2015). This was initiated by the Royal Dutch Pharmacists Association (KNMP) and therefore, the Netherlands Health Care Inspectorate (Alhusein and Watson, 2019). The underlying points of the 2008 markers were to select up understanding into the role of pharmaceutical administrations for management purposes and to create mindfulness among singular network drug specialists about their presentation (Curtiss *et al.*, 2004).



**Figure 1: Gender distribution**

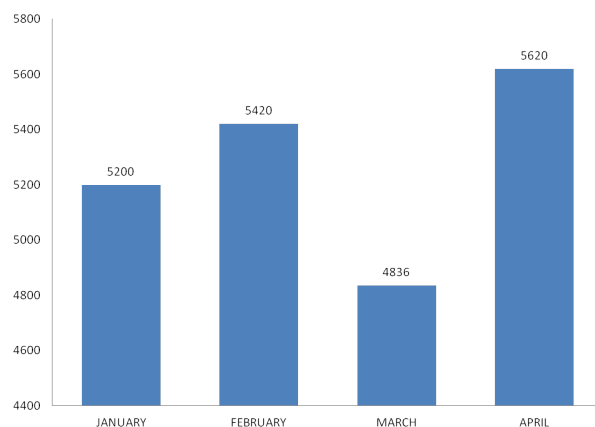


**Figure 2: Category of Respondent**

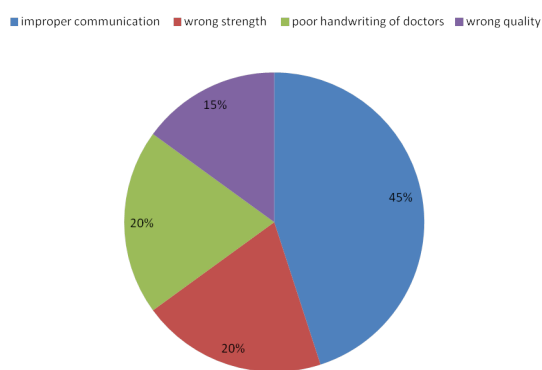
**MATERIALS AND METHODS**

**Survey Site**

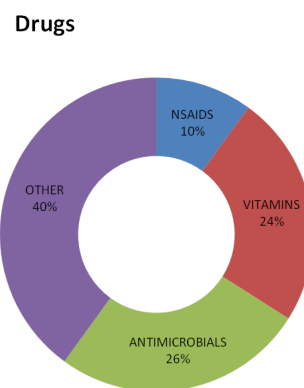
The present work was conducted in a pharmacy and associated regions of the Tertiary care teaching hos-



**Figure 3: Prescription Details**



**Figure 4: Dispensing Errors**



**Figure 5: Drugs Wasted from Pharmacy**

pital medical college hospital in Kozhikode.

**Study locality**

The survey was conducted in the pharmacy section.

**Study Duration**

The work was carried on for four months between January-April 2020

**Sample Size**

The sample Comprised of 64 staffs in the hospital,

including a clinical pharmacist and other staffs the selection of the sample was performed based on random sampling (Lawrence and Olesen, 1997).

### Data collection methods

Data was collected for the study in 2 ways,

1. Retrospective
2. Prospective

### Retrospective data

The pharmacy department of the hospital collected retrospective data.

### Prospective data

The Prescription was collected irrespective of diagnosis, age, gender, etc. across various departments of the hospital (Inch et al., 2017).

## RESULTS AND DISCUSSION

The Figure 1 Indicates on 64 persons, including staff and patients in various functional areas who directly or indirectly connected with pharmacies, we can understand that among the 46 persons, are males and 18 of them are females.

Figure 2 Depicts the study carried out in all functional areas of the Hospital which includes persons having various job roles. We can understand that out of 64 respondents, 21 were Pharmacists, 15 were suppliers. Patient and other staff accounted for 12 each followed by Nurses with 4 respondents

Figure 3 Depicts the Prescription were collected in pharmacy over a period of this 4 months. January to April. From the collected data the average prescription per month was found to more than 5000

Figure 4 Depicts that 45% percent of the dispensing errors occurs due to improper communications followed by wrong strength of the drug and poor handwriting of doctors which accounts to 20% percent and 15 % of the dispensing error due to wrong quality.

Figure 5 Represents the drugs are which are frequently discarded/wasted from pharmacy due to different reasons. we can understand that out of these drugs, 10% are NSAIDs, 24% are Vitamin tablets, 26% are anti-microbial and remaining 40% from different categories

## CONCLUSIONS

A lot of quality indicators provided insight into the character of pharmaceutical care; Pharmacists have an essential part in providing satisfaction among patients. The findings of the study suggest that

there is an utmost need to enhance the quality markers in the pharmacy and measures to be taken to avoid the dispensing errors and wastage of the drugs so the changes should be implemented for quality improvement between pharmacies.

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## Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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