CHAPTER: 08

TURNAROUND TIME FOR OUTPATIENT & RADIOLOGY DEPARTMENT AND ASSOCIATED FACTORS: A DESCRIPTIVE STUDY AT RAJIV GANDHI CANCER INSTITUTE AND RESEARCH CENTRE, ROHINI, NEW DELHI

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INTRODUCTION

Turnaround time in the radiology department is defined as the duration from the moment a patient enters the department, undergoes preparation, undergoes the procedure, to the reporting of the findings. In numerous healthcare systems, the turnaround time for elective care has been considered a crucial health issue, as it enhances more efficient patient flows [1][2]. It plays a pivotal role in determining the quality of hospital services, and beyond knowledge or expertise, it serves as an observable aspect that patients use to evaluate medical professionals. The quality of a product or service significantly influences its sales and the efficiency of the organization providing it. Turnaround time (TAT) serves as a benchmark for an organization's efficiency. A delay in TAT indicates a deficient quality delivery system within the organization. TAT makes the organization aware of the challenges and factors it faces in its delivery system. Consequently, the organization can take corrective steps to eliminate or overcome these challenges, ensuring the provision of required services with maximum potential and minimal or no delay to its consumers. TAT acts as a filter for an organization's image; a good TAT reflects a positive image, while a delay suggests some lag or deficiency in the organization's consumer dealings.

Regular TAT studies are essential for every organization to understand the challenges encountered by its consumers and devise solutions to overcome these issues [3][4]. A gap analysis serves as a methodology to identify and bridge the gap between dissatisfaction and client satisfaction. It also aids in pinpointing flaws within various departments and activities, enabling the organization to enhance standards and improve overall system proficiency and efficiency.

RESEARCH QUESTIONS

1. What was the turnaround time for the Outpatient and Radiology Department at the Rajiv Gandhi Cancer Institute & Research Centre?
2. Which factors were associated with the turnaround time?

RESEARCH OBJECTIVES

1. To evaluate the average duration of each step in the OPD through a time motion study.
2. To evaluate the average duration of each step in the Radiology Department using a time motion study.
3. To conduct a gap analysis for both departments to identify factors influencing turnaround time.

RESEARCH METHODOLOGY

The research employed an observational cross-sectional descriptive study design, focusing on the Radiology Department at Rajiv Gandhi Cancer Institute & Research Center in Rohini, New Delhi. The study included individuals who visited the Radiology department and OPD for consultation or follow-ups, while excluding those visiting other departments of the hospital.

The study utilized checklists and MS-Excel as tools, conducting data collection from April 5th to June 21st. A systematic random sampling technique was applied to select a sample size of 100 individuals from both the Radiology Department and OPD during the study period. The data collection procedure involved the use of a checklist, with operational definitions for Turnaround Time (TAT) and Gap Analysis. For data analysis, quantitative variables were assessed using mean and standard deviation, while qualitative variables were analyzed through frequency, percentage, and visual aids such as Pie charts and bar graphs. The entire data analysis process was conducted using MS Excel.

RESULT & DISCUSSION

For the CT scan process, the average time for each step was analyzed, including registration counter, post-registration waiting, preparation room, and CT room. The study revealed potential reasons for long waiting times, such as improper scheduling of processes, patients not arriving on an empty stomach, and delays in approving a single CT scan. The reporting of CT scans showed that 71% of cases were

reported by two junior radiologists, indicating a potential shortage of staff. Mammography process TAT was assessed, showing an average time of 38 minutes for each patient. The approval and validation times for mammography films were also highlighted. The study identified that 40% of cases were reported by senior radiologists, suggesting a shortage of radiologists.

The X-ray process was examined, indicating an average time of 54 minutes between the process and dispatch of X-ray films. The validation of X-ray films was reported to take an average of 5 to 7 minutes. The study revealed that 84% of cases were reported and validated by a single senior radiologist, further emphasizing a potential staff shortage. The MRI process was analyzed, showing a significant delay in the validation of MRI reports, with an average time exceeding 24 hours. The study identified a shortage of junior radiologists as a possible reason for the delay. For the USG process, the study highlighted a long waiting time before the USG process, potentially due to a shortage of radiologists. The total TAT for the USG process was 1 hour, 24 minutes, and 38 seconds. The study also identified challenges in radiology, including a shortage of doctors, nursing staff not dedicated to patients, and poor scheduling of various processes.

CONCLUSION

This study aimed to determine the turnaround time (TAT) for various processes in the Radiology Department and Out-Patient Department (OPD) and identify challenges faced by patients during these processes. The investigation revealed that the maximum waiting time was observed during Consultation (36 minutes and 45 seconds), while the minimum waiting time occurred at the OPD (2 minutes and 49 seconds), which was consistent for all patients.

Upon referral to their respective departments after consultation, the study identified the maximum waiting time for the Pre-Anesthetic Checkup (PAC) process (1 hour, 54 minutes, and 40 seconds). This department had fewer patient visits, making it an outlier in the study.

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