CHAPTER 14

To Study the Factors Affecting Average Length of Stay (ALOS) of Patients with a View to Suggest Measures to Reduce the ALOS to Improve Customer Satisfaction and Revenue Generation in a Tertiary Care Hospital

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INTRODUCTION

Hospital length of stay serves as a reliable and valid indicator for assessing the utilization of hospital resources. However, while average length of stay is a straightforward metric to quantify, it may not adequately capture the underlying distribution characteristics, potentially obscuring the impacts of different patient streams on the healthcare system. Essentially, the hospital length of stay for an individual patient is defined as the total number of patient days for an inpatient episode. This encompasses scenarios where a patient is admitted and discharged on the same day, as well as situations where admission and discharge occur on separate days [1]. The total length of stay, also known as total discharge days, represents the cumulative number of days of care provided to a group of inpatients from admission to discharge within a specified period. Notably, physicians play a pivotal role in determining treatment procedures and subsequently influencing the length of stay for patients. It's important to recognize that diagnoses and treatment approaches for the same admission cause may vary among physicians within the same department [2] [3].

The duration of hospital stays is inversely proportional to profit-making, as a higher length of stay typically leads to a lower bed turnover rate, subsequently impacting profitability negatively. This observation holds true for MAX Hospital, particularly considering its status as a super-specialty hospital with a diverse case mix across various specialties. Given the hospital's distinct protocols and package systems for different specialties, any deviation from the established protocol, resulting in prolonged patient stays, becomes a financial liability. The hospital's aim is to optimize resource utilization by performing additional procedures within the anticipated timeframe. Beyond

affecting bed turnover rates, extended hospital stays also contribute to high bed occupancy and diminished patient satisfaction. Prolonged lengths of stay not only reduce effective bed capacity but also disrupt the efficiency of the admission process, influencing both hospitalized patients and those awaiting admission, especially impacting the Emergency department.

RESEARCH AIM

To examine and analyse strategies for enhancing the efficiency of patient stays, ultimately aiming to optimize the Average Length of Stay (ALOS).

RESEARCH OBJECTIVES

1. To identify the factors contributing to an elevated average length of stay.
2. To propose strategies to mitigate a high average length of stay, leading to enhanced revenue generation and increased patient satisfaction.

RESEARCH METHODOLOGY

The research question aimed to explore various variables related to the admission and discharge processes that influenced the Average Length of Stay (ALOS) in a Private Multi-Specialty Hospital and to understand how a reduction in ALOS impacted the hospital's revenue generation. The study employed a prospective, cross-sectional, and analytical design, conducted at Max Hospital, Patparganj, Delhi, a 400-bedded facility. The study population comprised patients with stays exceeding 4 days in departments such as general surgery, medicine, gastronomy, orthopedics, and pulmonology. The research was conducted

from April 1st to May 31st, with strict adherence to ethical considerations, ensuring privacy and confidentiality. Primary data collection was implemented using a multistage sampling procedure, incorporating cluster sampling and purposive sampling. Each specialty within MAX Hospital was treated as a cluster, and purposive sampling was applied to specifically focus on Category B (Corporate and CGHS) and Category C (Cash and TPA) patients. The total discharged patients from the hospital during the study period amounted to 1755, with each specialty serving as a cluster. The research tools included observation, speciality-wise patient lists, and the Computerized Patient Record System (CPRS).

RESULTS AND DISCUSSION

A total of 1755 patients were discharged from various wards, including 419 from General Surgery, 528 from Internal Medicine, 291 from Gastroenterology, 351 from Orthopaedics, and 166 from Pulmonology. The total days of stay for discharged patients from wards amounted to 7920, with General Surgery having 1490 days, Internal Medicine 2557 days, Gastroenterology 1151 days, Orthopaedics 1736 days, and Pulmonology 983 days. The Average Length of Stay (ALOS) for different specialties was calculated, revealing ALOS values of 3.5 for General Surgery, 4.8 for Internal Medicine, 3.9 for Gastroenterology, 4.9 for Orthopaedics, and 5.9 for Pulmonology. The consolidated ALOS for all specialties was 5.1.

Further analysis of the percentage distribution of hospital inpatients by length of stay indicated that Pulmonology had the highest ALOS of 5.9, with the majority of patients staying 3 days or less. The stay pattern for various specialties was examined,

highlighting that Pulmonology had the highest prolonged stay at 33%, while Orthopaedics had the least at 11%.

CONCLUSION

In conclusion, MAX Hospital, Patparganj is confronted with the persistent challenge of prolonged patient length of stay, resulting in an elevated bed occupancy rate that falls short of the desired optimum level. The reasons behind this issue have been detailed in the preceding chapters, encompassing factors contributing to a higher bed turnover rate and prolonged waiting hours for patient admissions. The study underscores the urgency of addressing this predicament through strategic interventions. Implementing targeted measures, as outlined in the study, can serve as effective solutions to mitigate prolonged lengths of stay, thereby optimizing bed turnover rates, reducing bed occupancy, and minimizing patient wait times. These interventions hold the potential to enhance the overall operational efficiency of the hospital and improve the quality of patient care by fostering a more streamlined and responsive healthcare environment.

REFERENCES

1. *Badgal, A. (2015). Factors affecting the average length of stay of the patients in the inpatient department in a tertiary care centre in North India. Journal of Evolution of Medical and Dental Sciences, 4(2), 150-156.*
2. *Potashman, M. H., Stokes, M., Liu, J., Lawrence, R., & Harris, L. (2016). Examination of hospital length of stay in Canada among patients with acute bacterial skin and skin structure infection caused by methicillin-resistant Staphylococcus aureus. Infection and drug resistance, 19-33.*
3. *Pearson, S. D., Kleefield, S. F., Soukop, J. R., Cook, E. F., & Lee, T. H. (2001). Critical pathways intervention to reduce length of hospital stay. The American journal of medicine, 110(3), 175-180.*