

CHAPTER: 19

STUDY TO IMPROVE DISCHARGE PROCESS IN MULTISPECIALTY HOSPITAL BY APPLING DMAIC APPROACH

Kriti Tripathi

Student, IIHMR University

Dr. Anoop Khanna

Professor, IIHMR University

DOI: <https://doi.org/10.52458/9788196897475.2023.eb.ch-19>

Ch.Id:- IIHMR/NSP/EB/PHPMBT/2023/Ch-19

INTRODUCTION

Discharge refers to the formal conclusion of patient care and the release of an individual from a hospital or healthcare facility. The decision to discharge is made by the attending physician once the patient has fully or satisfactorily recovered. This process is intricate and involves multiple stakeholders, playing a pivotal role in both patient satisfaction and revenue generation for hospitals.

Timely discharge is crucial, as delays can adversely affect the patient's physical, mental, emotional, and physiological well-being, along with negative financial implications for the hospital. Prolonged stays beyond the prescribed time contribute to unnecessary utilization of hospital resources, representing inefficiency. Effective discharge management is essential to ensure patient satisfaction, maintain bed availability for emergency and elective admissions, uphold high-quality patient care, and sustain revenue generation.

Post-discharge care should not commence only when the decision to release the patient is made; ideally, discharge planning should initiate before or at the time of admission, depending on the admission type. Various factors, including individual characteristics, medical conditions (especially the presence of multiple pathologies), and organizational aspects (such as the absence of alternative care facilities), put patients at risk of delayed discharge. Nurses' participation is also a critical factor, and the article suggests strategies to enhance their involvement in discharge planning [1].

Research indicates that a combination of individual, medical, and organizational factors contribute to the risk of delayed discharge. While clinical conditions play a role, the organization's management of services for specific groups, including older individuals, those with multiple pathologies, and those with certain conditions and neurological deficits, is significant [2].

To address discharge-related challenges, a web-based software application called "Patient Tracker" was developed and implemented. This software aimed to streamline the discharge process, minimize

admission delays, and reduce surgical procedure cancellations. The study evaluating the software's effectiveness found a decrease in the number of cancelled surgical procedures. Additionally, there was an increase in the average number of inpatient admissions, and a reduction in the median emergency department length of stay was observed [3].

RESEARCH METHODOLOGY

The research was conducted at The Mission Hospital in Durgapur, West Bengal, over a three-month period from February 2015 to April 30, 2015. The study design employed a cross-sectional approach, with a sample size of 250 individuals, focusing on direct stakeholders involved in the discharge process, including nurses, resident medical officers (RMOs), doctors, coordinators, general duty assistants (GDAs), and patient parties. Convenience sampling was utilized, with exclusion criteria for unplanned discharges, Day of Request (DOR), Day of Request Begin (DORB), and discharges planned after 6 P.M. the day before discharge. The study encompassed various areas, including wards, the billing department, insurance/TPA desk, and the corporate desk, involving a diverse study population comprising healthcare professionals, administrative staff, patients, patient parties, and billing staff.

RESULTS & DISCUSSION

The examination of delays in the patients' discharge process uncovered several underlying causes. Firstly, the delay in preparing the initial discharge note by the Resident Medical Officer (RMO) was primarily attributed to the manual preparation method and the failure to leverage information technology systems. Subsequent delays in processing and issuing the discharge note by the coordinator were linked to frequent clarifications, challenges in deciphering the handwriting of RMOs/consultants, and communication gaps between the typing pool and the floors. The centralized discharge summary preparation process, insufficient manpower, and the unavailability of physicians/surgeons for proofreading also contributed to the delays. The delay in delivering the signed discharge summary to patients was associated with delays in

insurance or corporate billing clearances, extended time consumption using paper-based methods, and difficulties in accessing essential patient records. An analysis on a floor-wise basis revealed variations in average discharge times for cash, corporate, and TPA (Third Party Administrator) patients. Department-wise analysis highlighted the importance of prompt communication between departments and the TPA desk for the receipt of billing cards and subsequent clearances. In summary, these findings provide a comprehensive insight into the diverse factors contributing to delays in the patients' discharge process.

CONCLUSION

This research validated the utilization of Six Sigma DMAIC (Define, Measure, Analyze, Improve, Control) methods to streamline and optimize the patient discharge process. On average, there was a reduction from 4 hours to 2 hours for cash patients, 5 hours to 4 hours for corporate patients, and 6 hours to 5 hours for Third Party Administrator (TPA) patients. This significant improvement is expected to result in increased efficiency in managing patients within the department, leading to higher admissions, quicker room turnovers, enhanced hospital profitability, and improved patient satisfaction. The study also underscored the collaborative effort of the multidisciplinary team within the hospital in minimizing patient discharge times, emphasizing that various stakeholders play essential roles in the discharge process. It is not solely reliant on consultants or Resident Medical Officers (RMOs) to oversee the discharge process. Every department and individual involved in the discharge process, such as the billing department, pharmacy, and IT department, has a unique role in optimizing the discharge process. For instance, the billing department and pharmacy play crucial roles in ensuring timely cancellation of pending services, returning medicines, or adding any necessary bills before discharge.

REFERENCES

1. Pirani, S. S. (2007). *Preventing Delay in The Patient Discharge Process: An Emphasis on the Nursing Role*. *Can J*, 3(4), 1-24.
2. Rice, A. N., Douglas, C., Bosarge, H., Young, G., Muckler, V. C., & Vacchiano, C. A. (2021). *Fast-tracking patients in an academic hospital to increase efficiency and decrease discharge delays: a process improvement plan*. *Journal of PeriAnesthesia Nursing*, 36(6), 615-621.
3. Maloney, C. G., Wolfe, D., Gesteland, P. H., Hales, J. W., & Nkoy, F. L. (2007). *A tool for improving patient discharge process and hospital communication practices: the Patient Tracker*. In *AMIA Annual Symposium Proceedings (Vol. 2007, p. 493)*. American Medical Informatics Association.