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## Discharge Lounge Utilization

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**Discharge Lounge Utilization**

Areo Comonal and Jessica Goneh

Southern Illinois University Edwardsville

## **Executive Summary**

### **Introduction of the Problem**

This project investigates hospital throughput, a critical aspect of healthcare delivery, through the lens of discharge lounge utilization and the National Emergency Department Overcrowding Scale (NEDOCS) score. The significance of the NEDOCS score lies in its ability to provide a quantitative measure of Emergency Department (ED) overcrowding, which can help hospital administrators and healthcare providers identify periods of high demand and allocate resources accordingly. High NEDOCS scores often correlate with increased wait times, delays in care, and decreased patient satisfaction. NEDOCS scoring before implementation ranged between overcrowding and severe in this urban hospital setting.

Hospital throughput refers to the efficiency with which patients move through various stages of care, from admission to discharge. Efficient throughput is vital for optimizing resource allocation, reducing wait times, and enhancing patient satisfaction. Implementing a discharge lounge process can optimize capacity management by outlining criteria to enhance utilization and patient throughput. The discharge lounge had been implemented at the hospital but was not optimally used to serve its needs. Therefore, the project aimed to identify factors for non-utilization of the discharge lounge, develop an intervention for utilization, and reduce NEDOCS scores.

### **Literature Review**

To effectively address capacity constraints and improve patient flow, healthcare systems may need to focus on quality improvement (QI) projects like Rapid Medical Evaluation (RME), Discharge Before Noon (DBN), and discharge lounge utilization. Healthcare facilities often face capacity constraints affecting the overall hospital throughput. Limited bed capacity, increasing

patient demand, seasonal fluctuations, and inefficient processes are some of the contributing factors impacting throughput. These constraints can lead to longer wait times, overcrowding in emergency departments, and delays in providing timely care to patients. Overcrowding also strains healthcare staff and resources, leading to inefficiencies and decreased staff morale. Strategies for improving patient flow include implementing standardized protocols for triage and treatment, streamlining admission and discharge processes, optimizing staffing levels, utilizing technology for real-time monitoring and communication, enhancing care coordination between departments, and implementing quality improvement initiatives based on data analysis and feedback. Multidisciplinary teams can work together to identify bottlenecks, implement solutions, and continuously monitor and improve the flow of patients through the healthcare system.

A discharge lounge is a designated area within a hospital where patients who are medically stable but awaiting discharge can be moved out of acute care beds. By utilizing discharge lounges effectively, hospitals can free up acute care beds for incoming patients, thereby reducing ED overcrowding and improving patient flow. Discharge lounges provide a comfortable environment for patients to wait, receive discharge instructions, and arrange transportation, alleviating ED overcrowding and improving the overall throughput.

Improved throughput is essential for optimizing healthcare delivery and enhancing patient experience. Barone et al. (2022) found that implementing a discharge lounge with about 450 patients served in the first three (3) months with an approximate stay in the discharge lounge of 58 minutes resulted in approximately 18 days (about 2 and a half weeks) of bedtime saved. Utilizing a discharge lounge can be an effective strategy for improving hospital throughput.

Studies have shown that it can reduce the length of stay, increase bed availability, and improve patient satisfaction (Franklin et al., 2020)

### **Project Methods**

The project aimed to increase utilization of the discharge lounge to positively impact patient throughput and decrease boarding times in the emergency department. The quality improvement project was conducted in a 455-bed urban academic medical center that provides services to underserved populations. The EDs estimated annual volume is 70,000 with a 30% admission rate. Project leaders examined discharge lounge utilization rates through quantitative analysis using NEDOCS scores, while qualitative insights were gathered through a survey of staff perceptions and operational challenges.

A discharge lounge process map was developed to guide the inpatient nurses in identifying appropriate patients for the discharge lounge with inclusion and exclusion criteria for appropriate patients (Table 1). Weekly unit rounding was done to provide education to the units on the algorithm and distribution of cards with the inclusion/ exclusion criteria to be placed on the computers. Likert surveys were distributed to the inpatient units pre- and post-implementation to measure staff awareness and readiness to utilize the discharge lounge. Over nine months, a mixed-methods approach was used integrating qualitative analysis and quantitative assessment. This project was submitted to the SIUE IRB for approval and was considered a Quality Improvement Project (QIP) and exempted from board review.

**Table 1**

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"><li>• Can sit upright for 2-4 hours.</li><li>• Patients no longer require inpatient hospitalization.</li></ul>	<ul style="list-style-type: none"><li>• Patients who are unable to stand and pivot with minimal assistance.</li></ul>

<ul style="list-style-type: none"> <li>• Patients waiting for MEDS to Beds</li> <li>• Transportation will arrive within 2 hours.</li> <li>• Consideration for patients whose transportation may be longer than 2 hours.</li> <li>• Must be continent (foley appropriate)</li> <li>• Must be able to get to and from bathroom independently.</li> <li>• Please medicate all patients before they are discharged.</li> <li>• Minimal oxygen with their own personal oxygen tank</li> </ul>	<ul style="list-style-type: none"> <li>• No confused or incontinent patients</li> <li>• no PUI, COVID positive, isolation, or inmates</li> <li>• Patients who are not able to administer their own medications &amp; no medications anticipated in the next 2-4 hours.</li> <li>• No behavioral or cognitive deficits (i.e., confused, combative, dementia)</li> </ul>
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## Evaluation

Project leaders observed a correlation between discharge lounge utilization and NEDOCS score improvement. (Table 2) Before implementation overcrowding in the ED was represented by elevated NEDOCS scoring within the Overcrowded and Severe range. The pre-implementation NEDOCS score averaged 114.55 = overcrowded which prompted the need to increase the utilization of the discharge lounge. The absolute value of NEDOCS score results did decrease over time from 109.97 to 102.00 during the implementation phase with corresponding increase in discharge lounge utilization from 4771 to 10337, the total number of patients, respectively (Table 3).

**Table 2**

*NEDOCS Score Range*

Normal	0-50
Busy	51-100
Overcrowded	101-140
Severe	141-180
Disaster	>180

**Table 3**

Discharge Lounge Usage Across Time

Unit	Pre-intervention (n)	Post-intervention (n)	Percent Change
ICU	213	459	36.36% increase

Step-Down	1177	2549	46.74% increase
Med-Surg	3381	7329	53.84% increase
Total	4771	10337	51.14% increase

Project findings suggest the hospital's timely discharge of patients impacts downstream processes, affecting the hospital throughput. For Question 2 in the medical-surgical units: “On a scale of 1 to 5, how effective do you find the hospital discharge lounge in expediting patient discharge and improving throughput?” The respondents scored Question 2 low based on operational barriers and staff perspectives. Qualitative findings shed light on operational barriers and staff perspectives influencing hospital throughput. The findings underscore the importance of addressing systemic issues like ED triage bottlenecks and inefficient discharge processes leading to limited inpatient capacity. Addressing these operational challenges can improve patient flow and alleviate overcrowding.

### **Project Limitations**

While the project aimed to investigate the benefits of discharge lounge utilization to improve throughput, several limitations should be considered. First, the project leaders focused on the adult inpatient units along with the nurses comprising only 132 participants, which might have limited the generalizability of the findings. Second, the project's duration was only nine months, which might not have been sufficient to assess the sustainability of the observed benefits. Furthermore, the project leaders did not measure potential confounding variables such as patient satisfaction scores which could provide a better understanding of the extent of the benefits of an expedited discharge process through the discharge lounge. Despite these limitations, our findings provide valuable preliminary insights that warrant further investigation in larger, longer-term studies with rigorous methodologies.

**Impact on Practice**

Utilization of the discharge lounge did increase with a greater understanding of the process among the inpatient units. The creation of a process map with an algorithm allowed staff to achieve an organized thought process in the review of patients that can go to the discharge lounge. It empowered the units to play a larger role in patient throughput and helped decrease overcrowding in the ED. Feedback received from the surveys suggested increasing the hours of operation for the discharge lounge to accommodate late patient discharges. Also suggested was placing the criteria for discharge lounge utilization in the electronic medical record (EMR) so that staff can quickly determine which patients are appropriate for the discharge lounge.

**Conclusion**

In conclusion, this project provides valuable insights into the complex dynamics of hospital throughput, highlighting the interconnectedness of various factors and the need for a holistic approach to healthcare delivery optimization. By addressing operational challenges and leveraging data-driven strategies, hospitals can enhance throughput efficiency. Through streamlined processes, the increased utilization of the discharge lounge improved patient flow, and enhanced efficiency. By creating a conducive environment for patients awaiting discharge, the lounge has alleviated congestion in other areas of the hospital, allowing for better allocation of resources and increased capacity to accommodate incoming patients. Furthermore, the lounge has fostered interdisciplinary collaboration and communication among healthcare professionals, facilitating smoother transitions of care and ultimately improving patient outcomes. Reflecting on the transformative effects witnessed over the past nine months, it is evident that the implementation of a high-utilization discharge lounge has not only optimized operational efficiency but has also elevated the overall quality of patient care within the institution.



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