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## Mitigating Throughput Delays

Sherry Cabebe-Jacolbia  
*Walden University*

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# Walden University

College of Nursing

This is to certify that the doctoral study by

Sherry Cabebe-Jacolbia

has been found to be complete and satisfactory in all respects,  
and that any and all revisions required by  
the review committee have been made.

Review Committee

Dr. Anna Hubbard, Committee Chairperson, Nursing Faculty

Chief Academic Officer and Provost  
Sue Subocz, Ph.D.

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2026

Executive Summary: Organization Change Process Initiative

Mitigating Throughput Delays

By

Sherry Cabebe-Jacolbia

Executive Summary Submitted in Partial Fulfillment

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## Summary

Throughput widely affects all healthcare organizations. The patient care quality gap centers on throughput because poor flow and boarding causes overcrowding, leading to adverse outcomes and mortality. The practice-focused question was: How can the hospital throughput be improved to help prevent adverse effects when boarding in the emergency room (ER) for a long period of time? This process improvement project was implemented by multidisciplinary teams who addressed barriers in patient flow in real-time. The implementation stage showed boarding time in August of 2025 of 4,275 minutes to October 2025 of 2,545 minutes. The throughput performance trending scorecard of the metrics of ready to move (RTM) to assigned bed with the goal of less than 15 minutes were: August 2025 of 142 minutes to October 2025 of 148 minutes, transport response time with the goal of less than 15 minutes showed for August 2025 of 24 minutes to October 2025 of 24 minutes, and the confirmed discharge compliance for August 2025 was 88% to October was 89%. This gap was mitigated by identifying barriers and improving patient flow by focusing on emergency department (ED) boarding times, transport times, and timely discharge orders, which are shown in the descriptive and comparative analyses. Patient implications are early inpatient discharge, faster transport, and enhanced safety and satisfaction. Improving throughput promotes equitable and timely care; prevents health disparities; and supports a safer, more inclusive experience that may harm marginalized patients.

## Background

ED overcrowding and boarding is a continuous challenge in all healthcare, and it can negatively impact patient safety, mortality, and quality of care (Hammer et al., 2022). The project site organization is experiencing ongoing extended boarding times in the ED. At times,

patients board for up to 7 days. The project site experienced an occurrence where a patient boarded for several days, causing mortality. The project site supports trauma, segment elevation myocardial infarction, stroke, and all other medical emergencies causing an influx of patients to be seen, while critical patients are not monitored closely and waiting for an inpatient bed. The project question guiding this project was: How can the project site improve the hospital throughput to help prevent adverse effects when boarding in the ER for a long period of time? The project change focused on barriers with transport, timely provider discharges, and inpatient discharges. Substantial evidence supports the practice gap between ER boarding and throughput. Prolonged ED boarding is associated with increased adverse events, higher mortality rates, delayed care, and overcrowding (Hammer et al., 2022). According to Valli et al. (2021), the early mortality rate in the ED ranges from five to 30 deaths per 100,000 visits, consistent with delays in patient flow and increased boarding. The strength of this evidence is compelling because throughput affected by boarding and overcrowding is associated with an increase in adverse events and mortality rates.

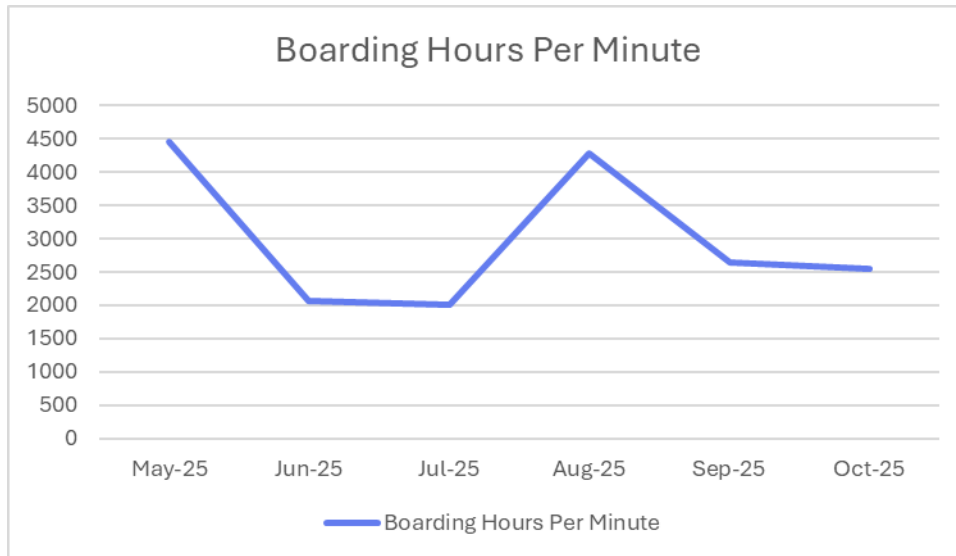
### **Project Development**

The outcome variable I used to evaluate the effectiveness of the throughput project intervention is the ER length of stay, transport times, and timely provider discharge order placement. These variables reflect effective patient flow and patient safety outcomes. De-identified data were obtained via the project site organization's electronic health record and operational dashboards via TeleTracking. All patient identifiers were removed prior to data extraction. Data was aggregated at the unit and departmental level while preserving patient privacy and complying with Health Insurance Portability and Accountability Act of 1996, Pub.

L. No. 104-191 and institutional review board requirements. I collected baseline data within a 3-month period prior to, during, and postimplementation. The timeframe was used as a comparison of patient flow aligning with the process of change. The data used for analysis during the evaluation were flow metrics, including means, medians, and ranges. I conducted comparative analyses to compare pre- and postimplementation data. Run charts and trend analyses were employed to track the changes over time. I then used the results of the analysis to determine the effectiveness in reducing ER boarding, improving throughput, and enhancing safe patient outcomes

### **Results**

Postimplementation evaluation demonstrated an improvement in the project site's ER for patient throughput. ED boarding time and overall length of stay decreased following the implementation process, confirming improvement of throughput from the ER to the inpatient care areas. The project site organization's ED boarding time improved by 1,730 minutes from the implementation stage in August of 2025, which was 4,275 minutes; in September 2025, it was 2,646 minutes and in October 2025 was 2,545 minutes. The throughput performance trending scorecard of the metrics of RTM to assigned bed with the goal of less than 15 minutes were: August 2025 of 142 minutes, September 2025 of 142 minutes, and October 2025 of 148 minutes, with an improvement compared to January 2025 of 310 minutes. The transport response time with the goal of less than 15 minutes showed for August 2025 of 24 minutes, September 2025 of 24 minutes, and October 2025 of 24 minutes, compared to January 2025 of 28 minutes. In addition, the confirmed discharge compliance for August 2025 was 88%, September 2025 was 87%, and October was 89%, with a slight improvement of 2%.

**Figure 1***Boarding Hours Per Minute*

The project led to a positive impact on the organization by reducing boarding and overcrowding in the ER. Improved throughput enhanced collaboration between the ED, nursing, and ancillary departments. ER nurses saw a decrease in workload with patients boarding and were able to stay focused on direct patient care and quality outcomes. Furthermore, the project enhanced throughput, which led to improved quality metrics, patient safety, and regulatory benchmarks.

Several limitations may have influenced the outcome of this project. The project was conducted within a single organization, which limits generalizability. Staffing variability, patient volume fluctuation, and concurrent organization initiatives may have affected the outcome. Another limitation of the project is the short time span spent versus a longer time span ensuring

sustainability. Despite the limitations, the project outcome still depicted the throughput improvement.

The project is important beyond the local site because throughput is a nationwide issue in all healthcare organizations. Identifying the gaps and providing project findings contributes to nurse-led initiatives, utilizing evidence-based practice, and enhancing safe patient care and equity in emergency care. Throughput improvement can also reduce disparities in timely access for vulnerable populations. The project framework can be adapted by other healthcare organizations who are experiencing the same gaps in their throughput process and improve patient outcomes.

### **Conclusions**

The throughput improvement led to a positive impact on the project site organization by reducing boarding and overcrowding in the ER. Improved throughput enhanced collaboration between staff as well as improved operational efficiency and patient safety. Nursing staff saw a decrease in workload strain and greater focus on care coordination and patient care. The project site organization reached benchmarks, maintained patient care, and improved quality outcomes.

My future recommendations include utilizing the bed tracking system reports and increasing staff visualizations, standardizing admission and discharge workflow, and implementing staff education in throughput practices. Continuous performance monitoring and assessing any barriers that can elicit bottlenecks in throughput could help sustain the workflow.

For nursing practice, the project emphasizes coordinating care, optimizing patient flow, and leading quality improvement outcomes. From a social change perspective, improved throughput promotes equitable access to health and emergency care, reduces healthcare

disparities, and fosters safe quality care. By addressing delays, the project supports patient-centered care and the organizational commitment that all patients receive timely care reducing delays and potential adverse events.

## References

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