



## KEY POINT SUMMARY

### OBJECTIVES

To discover whether or not the split flow model reduces DLOS for all ED patients when compared with an emergency department of comparable size that uses a different model, and to find out if adding a PIT further enhances the split flow

### DESIGN IMPLICATIONS

This study demonstrates that the split flow model of ED triaging is further enhanced by the inclusion of a PIT. Designers could work to tailor ED spaces to accommodate these models, as their implementation appears to be on the rise. Adequate entrance space with room for initial evaluation from the PIT could help facilitate a smoother flow throughout the triage process.

## Are split flow and provider in triage models in the emergency department effective in reducing discharge length of stay?

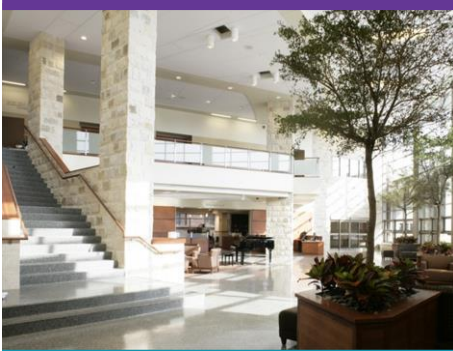
Pierce, B. A., & Gormley, D. 2016 | *Journal of Emergency Nursing*, Pages 1-5

### Key Concepts/Context

This paper presents a quality improvement (QI) project by comparing the performance of two different emergency departments (EDs). The idea behind the split flow model is to allow for a second flow stream of patients through the ED, parallel to the regular acute/critical care flow stream, that is ultimately intended for patients with problems that are not considered complex. The role of the provider in the triage (PIT) model is to enhance patient triage assessment by providing patients with an upfront evaluation upon entering the ED. A primary indicator of the efficacy of triage models such as the split flow and provider model is discharge length of stay (DLOS). The split flow model is considered a “new generation of emergency department” in the U.S., and newly emerging research is still articulating the effects of this approach. Few studies have yet to explore the split flow model while including a PIT.

### Methods

Two hospitals were compared: the first was built in 1984 and features an ED with 34 treatment spaces and an annual patient volume of approximately 44,700, while the second was built in 2013 and has an ED with 46 treatment spaces and an annual patient volume of approximately 43,000. The newer hospital served as the experiential site implementing the split flow and PIT model, while the older hospital served as a control and used a traditional nursing triage model that mixed the patient population. Researchers deduced the number of patients discharged from each hospital in 2014, excluding patients who left without being seen or who left against medical advice. The total number of discharged patients included in this study was 68,603 (33,977 from the experiential facility and 34,626 from the control facility). From this data, time from door to bed, door to provider, and DLOS were calculated to compare the two facilities.



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## Findings

The experiential hospital using the split flow model showed a reduction in DLOS by 16.3 minutes on average. No improvement in front-end throughput metrics was found when the two facilities were compared. The split flow model was significantly enhanced by the use of a PIT; there was a 28.5-minute reduction in DLOS when split flow with PIT was compared to the traditional triage model.

## Limitations

The authors identified several limitations in this study. Differences in providers, including different types of experience, design, and other operational processes were not accounted for in the comparisons. Patient demographics were also considered a confounding variable. Since this was purely a study in QI, the authors note that the results cannot be generalized to a larger population.

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