Results Pending Unit: Improving ED Flow and Patient Satisfaction

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PICOT Question:

In patients waiting in the emergency department (ED), will patient placement in a Results Pending Unit (RPU) improve ED patient flow by decreasing ED wait times and lengths of stay (LOS), and improve patient satisfaction?

Introduction: Emergency departments (ED) are often faced with long wait times and lengths of stay, which leads to unsatisfied patients. A Results Pending Unit can improve the ED workflow and lead to shorter wait times and lengths of stay. Patient satisfaction can be affected by the shorter time frames spent in the ED.

Methods: A pre- and post-implementation comparison study was undertaken to evaluate the ED workflow and patient satisfaction ratings after implementation of the RPU on October 15, 2019. Administrative computer-generated reports and Press Ganey scores were collected and analyzed to determine baseline metrics prior to implementation, and then re-evaluated post implementation to determine results.

Results: Outcomes of workflow and patient satisfaction were analyzed post-implementation of the RPU. With the implementation of the RPU, ED workflow was improved through decreased wait times and LOS. Patient satisfaction scores increased for Overall impression of the ED but did not show an improvement post-implementation of the RPU.

Conclusion: The goal of meeting the national average wait time and length of stay was obtained by implementing an RPU. The facility patient satisfaction of 87.4% for Overall Assessment was met. The goal set for "Arrival" of 85% patient satisfaction was not met and did not show improvement post-implementation of the RPU.

Introduction

Emergency departments (ED) are under constant pressure to provide quality care in a timely manner while ensuring patients remain satisfied with the care given (Burgess, Hines, & Kynock, 2018).

Improving ED workflow by reducing patient wait times and lengths of stay (LOS) can negatively affect patient outcomes and can lead to negative patient satisfaction scores for hospitals (Burgess et al., 2018).

Purpose

The purpose of this study was to measure the impact of moving ED patients to a Results Pending Unit (RPU) who are awaiting disposition (i.e. test results, transfer/discharge orders, or specialty procedures) for workflow and patient satisfaction.

The metrics measured were wait times from arrival to intake, length of ED stay, and two items for the Consumer Assessment of Healthcare Providers and Systems (CAHP) survey.
1. Overall impression
2. Arrival

Patient Flow and Poor Patient Satisfaction

Patient Flow

There is a direct correlation between long ED wait times, increased LOS, and ED overcrowding (Zhao & Peng, 2015).

Schreyer and Martin (2017) conducted a study that found 16 more patients could be seen, treated, and discharged from the ED by utilizing an RPU.

Poor Patient Satisfaction

When patients are faced with long ED wait times and extended LOS, patients can easily become dissatisfied and are likely to express that dissatisfaction on the Press Ganey survey (McCraw & Fuller, 2017).

Frank (2017) found that utilizing a system, such as the RPU, can keep ED care flowing, allowing patients to feel as though there is continuous care and treatments.

Study Design, Sample, and Setting

Study Design
- Baseline data was collected from administrative reports generated thru the electric health system.
- The data was extracted into an Excel worksheet dissected into number of patients seen each day of an 8-month period.
- Wait times and LOS were calculated to provide a baseline pre-implementation of the RPU.
- Wait times and LOS were analyzed over a 2-week period after implementation of the RPU.
- Patient satisfaction scores were collected and analyzed from Press Ganey surveys received from this time period.

Number of ED Patients	Month	Length of Stay in Hours
2890	January	153.89
2781	February	137.14
2875	March	160.87
2779	April	147.53
2787	May	149.57
2733	June	140.22
2796	July	148.62
2641	August	139.77

Number of Patients Admitted to the Emergency Department by Month and Length of Stay in Hours

Sample and Setting
- Research was conducted at a rural city/county owned hospital with 16 ED beds.
- The hospital is classified as a medium volume facility by Medicare standards.
- The sample included patients waiting for test results, transfer/discharge orders, or specialty procedures.

Results: ED Workflow (Wait time and LOS)

Over the 2-week period, ED wait time and LOS was decreased when compared to pre-implementation of the RPU.

Total hours of ED LOS from October 1-14, 2019 (pre-implementation) = 63.75
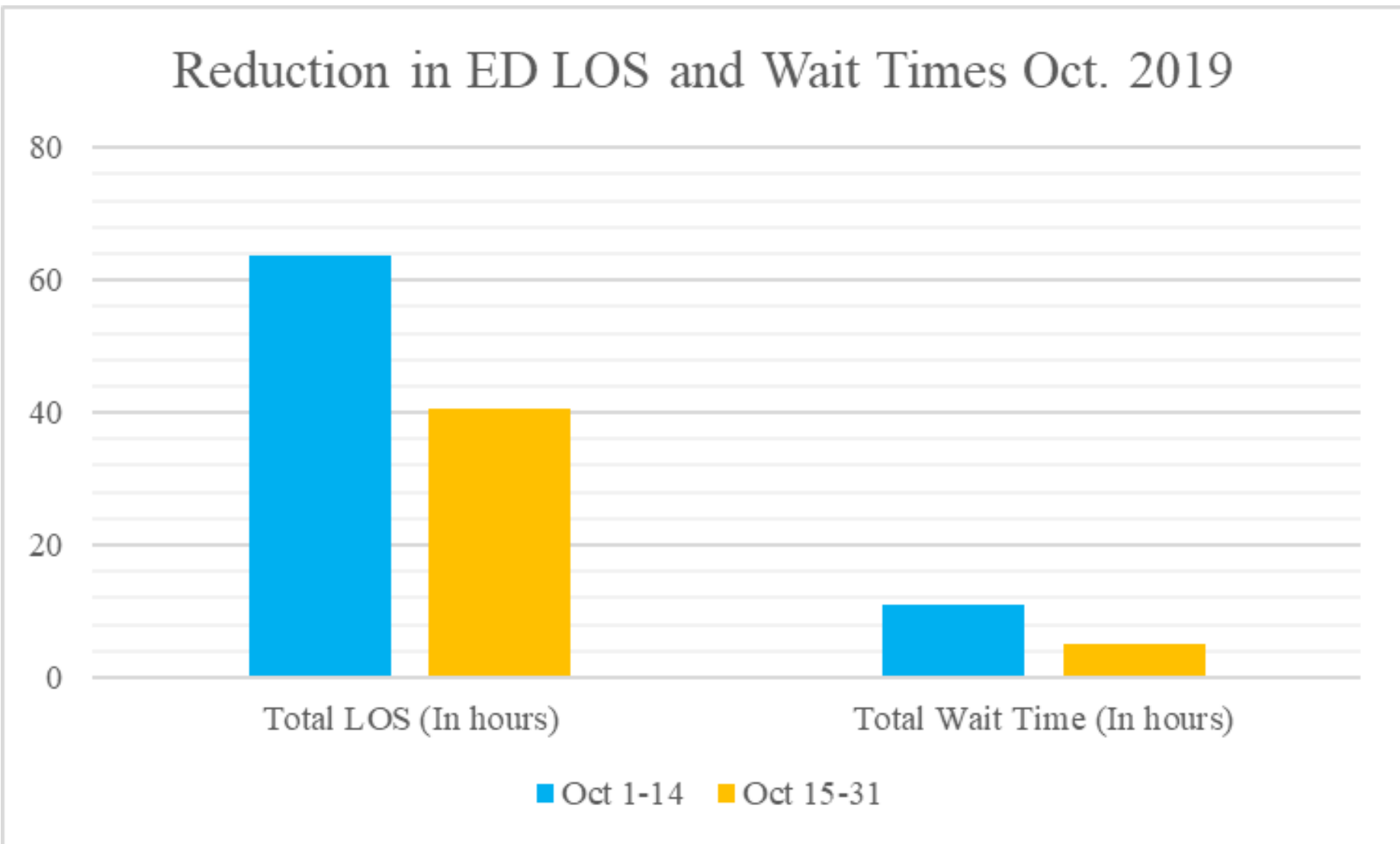
Total hours of ED LOS from October 15-31, 2019 (post-implementation) = 40.46

Total hours of wait time from October 1-14, 2019 (pre-implementation) = 10.87

Total hours of wait time from October 15-31, 2019 (post-implementation) = 5.16

Month (2019)	ED LOS (in hours)	ED Wait Time (in hours)
Oct. 1-14	63.75	10.87
Oct. 15-31	40.46	5.16

Decrease in both LOS and wait time after implementation of RPU

**Total LOS and wait time decreased after implementation of the RPU implementation**

Results: Patient Satisfaction Scores

Prior to the implementation of the RPU, ED goal for both Overall Assessment and Arrival on the CAHPS were not met.
- Overall assessment goal was 87.4% and score from surveys was 85.8%
- Arrival goal was 85.0% and score from the surveys was 84.4%

After implementation of the RPU, the score for Overall Assessment improved and there was no change in the Arrival score.
- Post-implementation, the score for Overall Assessment increased to 88.9%
- Post-implementation, the score for Arrival was 84.0%
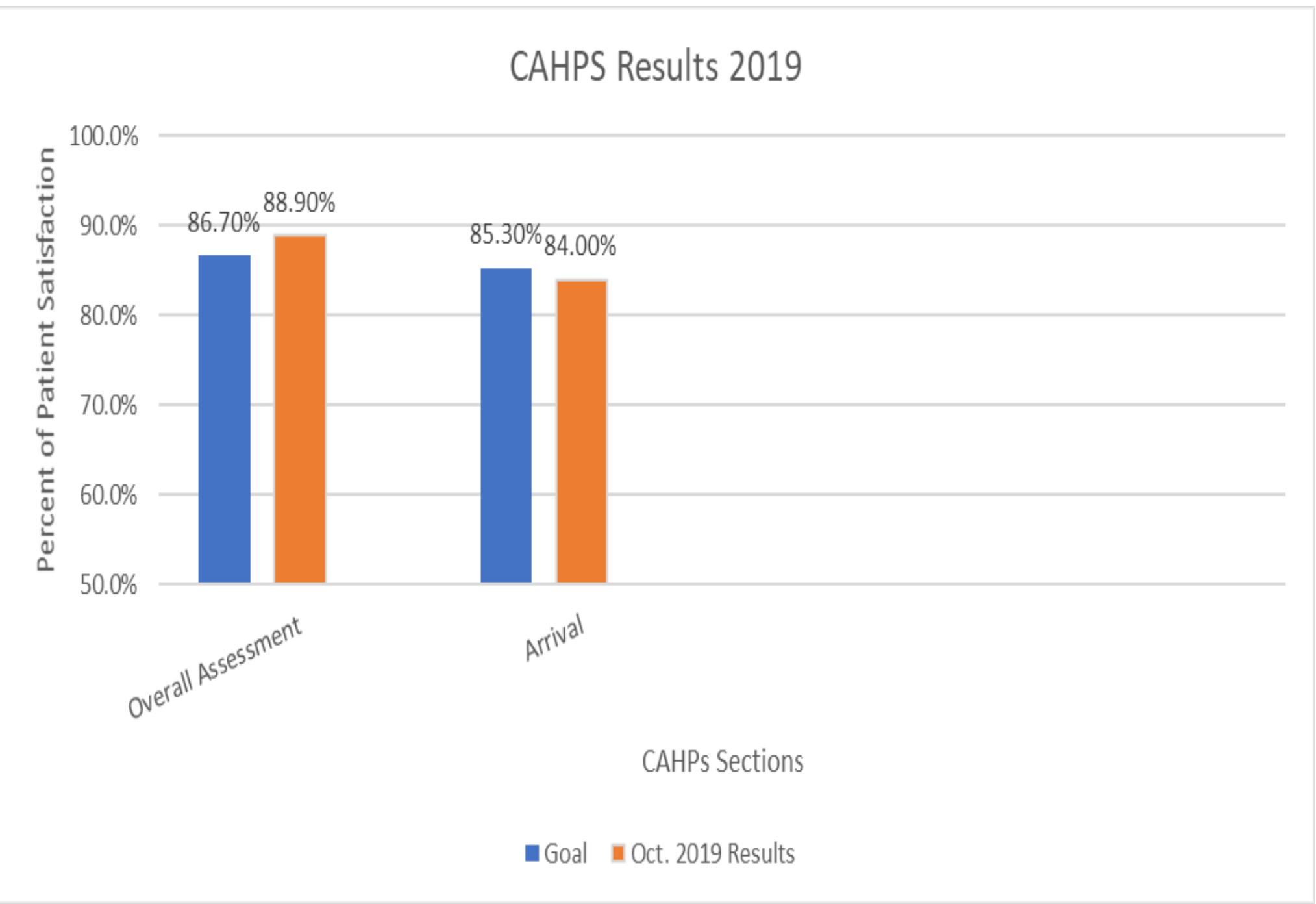
Patient satisfaction results collected after implementation of RPU

Summary

- The implementation of a RPU can improve ED workflow.
- By utilizing the RPU, ED wait times and lengths of stay are reduced.
- The implementation of the RPU did improve patient satisfaction overall, but did not improve "Arrival", which measures wait times.

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