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Reducing Unanticipated Pediatric Transfers to Higher Level Care by Improving Admission Triage.

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Reducing Unanticipated Pediatric Transfers to Higher Level Care by Improving Admission Triage

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Introduction/Background

Pediatric hospitals across the nation are faced with the task of preventing unanticipated transfers to higher level care (Pediatric Intensive Care Unit) as these pose a great risk to patient safety and overall outcomes of care. This risk is of great alarm as it has been established that floor admissions to the PICU have higher odds of mortality than admissions from the emergency department (Pediatr Crit Care Med 2008; 9(1)20-25). During the winter of 2015 at Lehigh Valley Children's Hospital, it was noted that patients admitted to the floor directly from outside hospitals were at risk of quickly deteriorating and having to be sent to the PICU within 24 hours of admission. Unanticipated transfers not only created a safety risk for pediatric patients, increasing the chances of an adverse event, but also disrupted workflow and created a poor utilization of resources.

Problem Statement

This quality improvement project aimed to reduce the rate of unanticipated pediatric transfers to higher level care within 24 hours of admission by 10% in the 2016 winter season.

Methodology

At the Lehigh Valley Children's Hospital, a patient safety report is filed every time there is an unplanned transfer to the PICU. This project employed a chart review process where data from last winter's safety reports was used to track patient features related to unanticipated transfers. This chart review in addition to a literature review yielded clinical characteristics associated with early unplanned admission to the PICU which included age less than one year old, prematurity, and having a respiratory complaint. This information allowed for the creation of an algorithm which instructed pediatric hospitalists to send specific patients to the Children's ER (CHER) for a second evaluation before admitting them to the floor. Secondarily, the disposition of these patients was actively tracked in order to test the effectiveness of the algorithm.

Results

Patient safety reports dating from Sept. 2015 to Jan. 2017 were organized into a run chart displaying the monthly rate of unanticipated transfers to higher level care. The rate was determined by dividing the number of transfers to higher level care by the total number of admissions that month. When comparing 2015 versus 2016 winter data, the rate of unanticipated transfers decreased from 2.03% to 1.92%, around 5%. Meanwhile, the tracking of patients sent to the CHER yielded 14 patients sent for a second evaluation with three of them going to the PICU (21%).

Figure 1. Algorithm Used to Determine Which Patients Need a Second Evaluation in the CHER

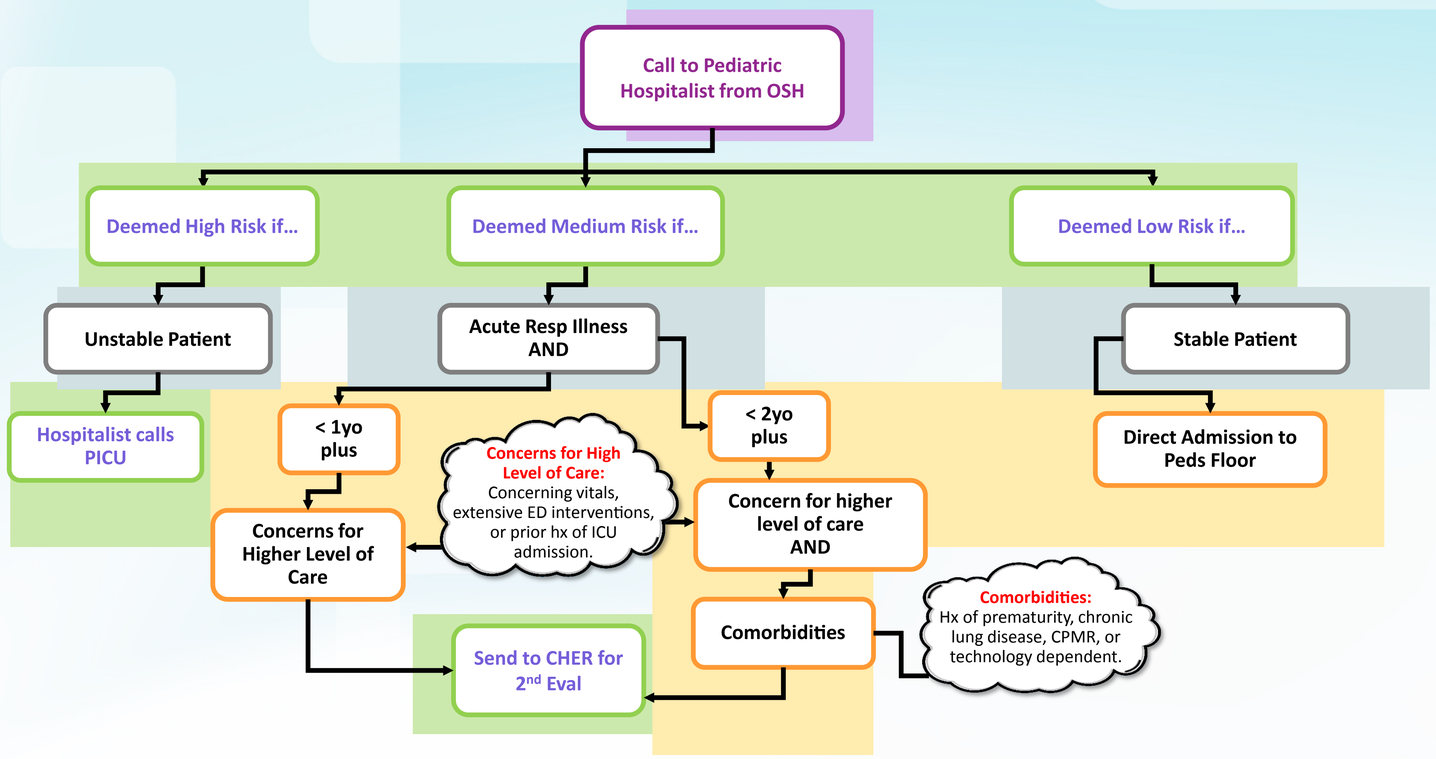
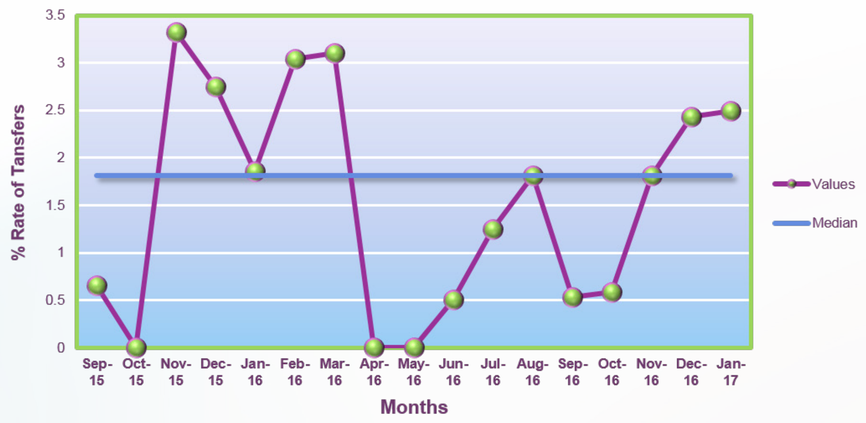


Figure 2. Run Chart Displaying Monthly Rate of Unanticipated Transfers to Higher Level Care



Conclusions and Future Implications

Preliminary data shows a reduction in the rate of unanticipated transfers to higher level care by less than 10%, not meeting the set goal but showing improvement. Based on the 14 patients that were sent to the CHER, some of them meeting only part of the algorithm criteria, it can be inferred that changes to the algorithm to include older patients could improve the rate of transfers. The three patients sent to the PICU are an expected number of patients that should be captured with the algorithm, about 20%, thus proving effective. Finally, further gains could be made if future projects look into implementing other triage tools for inpatient admission such as the Pediatric Early Warning Score when deciding where patients should go after their evaluation in the CHER.

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