

# Improving Emergency Department Throughput with a Quality Improvement Process

Haley Bush RN, BSN ; Celeste Calhoun MSN, RN, CPEN ; Natalie Carpenter MSN, RN ; Beth Evans RN, BSN ; Jennifer Gadnai RN, BSN, MBA

## Imagine the possibilities of improved patient outcomes from the beginning

### BACKGROUND

Cook Children's Medical Center, located in Fort Worth, Texas is a 430 bed free-standing children's hospital with a 77 bed Emergency Department, that sees 140,000 patients annually.

### AIM

Patients who leave the Emergency Department before receiving an evaluation and treatment may have poor outcomes, up to and including loss of life. If parents decide to leave prior to a provider seeing their child, it is usually during the wait between triage and treatment.

### WHAT'S NEW

Realizing the importance of early intervention, we developed an evidence based interdisciplinary collaboration to provide early evaluation and care.

Our ED underwent a front end redesign including:

- A provider in triage
- The use of nurse driven protocols
- Direct bedding when possible
- A private tasking space to begin diagnostics if no ED beds are available

### METHODS

**Provider in triage:** staffed with an ED physician and an Advanced Practice Provider (NP/PA) during the peak volume mid-shift hours. ED physicians are paid a daily shift rate and the RVU's for each patient they discharge, while the APP is paid their hourly rate regardless of which area they are assigned to.

A patient being seen by a provider in triage allows the Emergency Department to bill for those that would leave prior to treatment complete.

RVU's for patients discharged from triage offset the hourly provider rates.

**Tasking space:** staffed with a nurse and paramedic to complete diagnostic procedures while the patient is in the waiting room.

These include:

- Respiratory swabs
- Blood collection
- In/out urinary catheter
- EKG
- Ear wash
- Nebulized breathing treatments
- Ultrasound

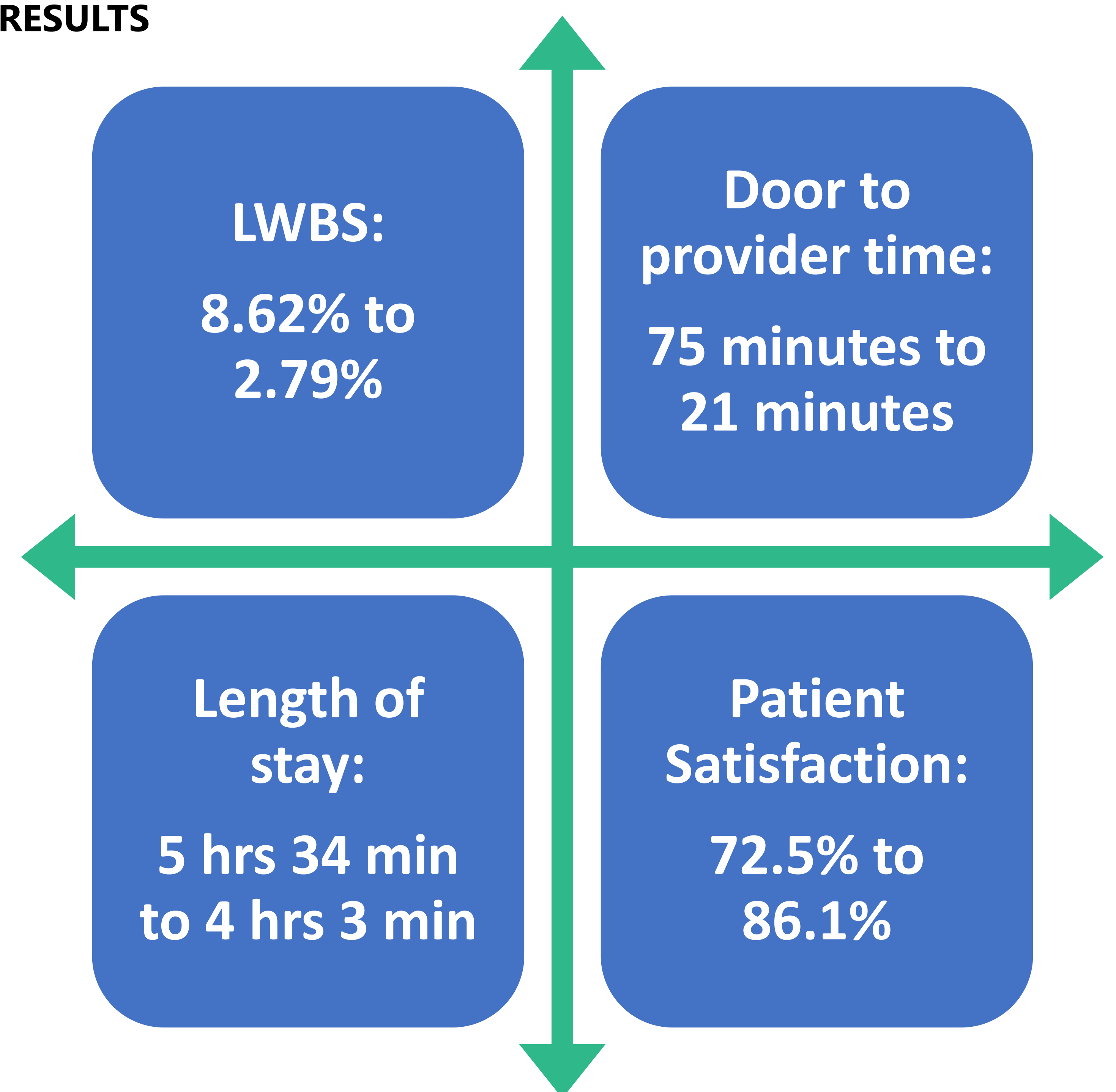
Staff is responsible for communicating with the triage provider and charge nurse regarding further orders, results, or worsening patient condition.



### CONCLUSION

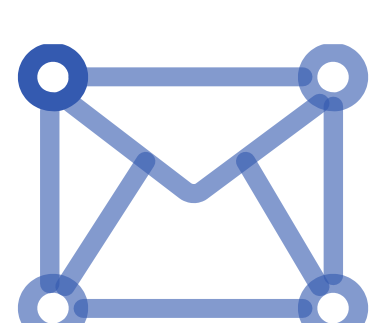
Implementation of these strategies has resulted in statistically significant improvements in our facility.

### RESULTS



### References:

- 1) Carney, K.P., Crespin, A., Woerly, G., Brethouser, N., Baucum, J., and DiStefano, M.C. (2020). A front-end redesign with implementation of a novel "intake" system to improve patient flow in the pediatric emergency department. *Pediatric Quality & Safety*, 2(5), e263; DOI: 10.1097/pq9.0000000000000263.
- 2) Dreher-Hummel, T., Nickel, C. H., Nicca, D., & Grossmann, F. F. (2021). The challenge of inter-professional collaboration in emergency department team triage—An interpretive description. *Journal of advanced nursing*, 77(3), 1368-1378.
- 3) Gorski, J.K., Arnold, T.S., Usiak, H., and Showalter, C.D. (2021). Crowding is the strongest predictor of left without being seen risk in pediatric emergency department. *American Journal of Emergency Medicine*, 48, 73-78. DOI: 10.1016/j.ajem.2021.04.005.
- 4) Kappy, B., McKinley, K., Chamberlain, J., Badolato, G., Podolsky, R.H., Bond, G., & Schultz, T. (2023). Leaving without being seen from the pediatric emergency department: A new baseline. *Journal of Emergency Medicine*, 65(3), e237-e249.



Contact: Natalie Carpenter  
Natalie.Carpenter@cookchildrens.org