

# OSF Escanaba Emergency Department Throughput Project

## Opportunity Statement

OSF HealthCare St. Francis Hospital & Medical Group (SFH) identified opportunity to improve various processes that impact ED throughput and patient experience. During FY22, Q1, Q2, and Q3, ED throughput metrics were below target in the following areas: Left before treatment complete, LOS overall, 2-hour boarders, and patient experience. A large area of opportunity surrounds the 15% of ED patients who are admitted to SFH or transferred to tertiary facilities. Through a partnership with the Michigan Center for Rural Health, an opportunity exists for Performance Improvement and SFH ED to collaborate with a Lean Six Sigma consultant experienced in Critical Access Hospital ED throughput improvement projects.

## Initial Improvement Opportunities

- Reduce Left before treatment is complete
- Reduce LOS Overall
- Reduce 2 Hour Boarders
- Improve the Patient Experience

The SFH pre-planning began at the end of summer 2022, with the project kicking off with an onsite visit on October 3, 2022. Pre-planning included a review of key metrics and a discussion of numerous processes. The onsite visit covered three and half days of technical assistance focusing on understanding the current state. The visit included observation, and interviews with staff in the emergency department (ED) and all departments impacting the ED. The next phase of the visit included a value stream mapping session, which walked through each step of a patient's visit from arrival to disposition to discharge, noting issues/barriers in the processes along with possible solutions. To better understand the complexities of the ED, we broke the patient experience into 3 zones:

1. Zone 1 - Arrival, Triage/room, Provider
2. Zone 2 – Registration, Patient Care, Disposition
3. Zone 3 – Discharge, Admit, Home, Transfer

All staff was encouraged to add issues and solutions to the map using color-coded sticky notes left on the wall during the visit. The team next met and used an impact effort matrix for all issues to help determine the priority of projects to be worked on. The last day of the onsite visit included a debrief with OSF Escanaba Leadership and the project's next steps.

## Current State

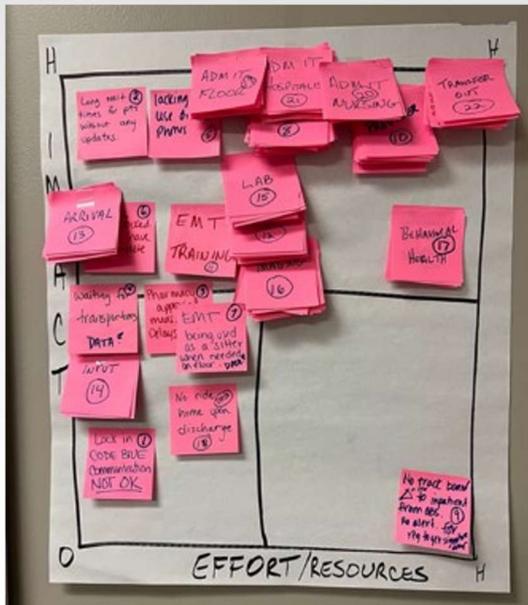


The orange post-it notes represent the major work cells the patient experiences, while the yellow post-it notes represent process steps in each work cell. The Lean team identified 50+ steps that a patient might encounter in their journey through the ED.

The pink post-it notes represent waste in the process. There are 8 wastes in healthcare, e.g., Transport, Inventory, Motion, waiting, Downtime, Overproduction, Over-Processing, Defects, Unused Skills. 60+ waste are identified in the ED process. This is just a first pass!



# Impact/Effort Matrix



The Impact/Effort Matrix assists with the prioritizing of solutions. The left upper square represents those actions that would give higher impact with low level of difficult to implements. Therefore, the left upper block would the waste that be addressed first.

The right upper block represents waste that could be solved with hard work but would have high payoff. It should be noted, that few waste fell in the lower right square which would indicate the action would be difficult and the payoff would be low.

The ED throughput project next consisted of virtual coaching sessions one to two times a month over the next 11 months. The virtual coaching sessions generally ranged between 60-90 minutes. During the virtual sessions, the team discussed project action items, evaluated their effectiveness, and explored alternative solutions. The project included quick wins, some items took time, and others are in progress.

## Quick wins included:

- ED Est Transfer Checklist
- Ancillary/ED communication (i.e, lab entering room, CT, protocols, etc.)
- ED Arrival signage
- IV Disconnect Discussion
- ED Room Supply Checklist

## Other action items completed:

- ED Call Off Trends
- Arrival Phone Process
- Orders After Admit Accepted

- Provider/Hospitalist work up check list

**Prioritized Action Items:**

- Admit Process/Bed Planning – Implemented and the target was met in August and September with a decrease in time of 67 minutes
- ED RNs drawing labs – In Process – implemented 10/30/2023. The process was tested with a pilot and post-pilot which led to 7-9-, and 11-12-minute faster times for ordered to received test.
- CT Scheduling Review/Optimization – Revised and implemented new scheduling. Metric: Minutes between End Exam and Exam ordered for ED patients is 60 minutes or less.
  - Over the first 4 months since implementation

Month	Total % ≤ 60 Min.
Baseline	54%
July-23	87%
August-23	63%
September-23	66%
October-23	70%

- Standardize patient tracking board use/functionality optimization – In-Process
- Review of Rapid Treatment Area & recommendations – Implemented new processes and utilized a different space.
- Provider practices (batch orders, assigning patients, orders before assessments) – TBD  
Escanaba moved to certified Emergency Providers versus general/family practitioners.

The project has been successful in reducing ED throughput times by 20-40 minutes in the past few months and is expected to continue improving. Currently, significant efforts are being made to improve the ED throughput across all 16 hospitals of OSF, which include 10 acute care, 5 critical access, and 1 transitional care facility. The Escanaba project is playing a key role in providing insights into recommended process changes, sharing solutions, and lessons learned among the 5 smaller hospitals.

We have been grateful for the efforts and commitment shown by Lindsey Stearns, the Strategic Program Manager for Performance Improvement, and Beth Carlson, the Performance Improvement Specialist, towards our project over the last year. Their hard work has been truly appreciated, and we have also enjoyed the friendship we have developed with them.