THE DIAGNOSIS

April 2018

CASE STUDY

Proven Solutions Worth Sharing

ED OPERATIONAL CHANGES LEAD TO IMPROVED METRICS

BACKGROUND

In an urban medical facility, home to 400-inpatient beds, 40-ICU beds and the representation of all specialties with the exception of plastics, ENT and pediatrics, our partner offers tertiary care to local residents and the surrounding communities.

In July 2016, a new medical director was named for the 44-bed emergency department (ED) which sees approximately 65,000 visits per year. The team is now staffed with 11 physicians and seven APCs with approximately 46 hours of physician coverage and 40 hours of APC coverage per day. Over one year's span, this high-acuity ED made several operational changes to improve efficiency.

CHALLENGE

Prior to hiring a new medical director, the ED was facing a number of operational challenges. As a result, the hospital's metrics revealed prolonged arrival to provider times, high left without treatment (LWOT) rates and unacceptable time to admit and discharge turnaround times. The ED team worked together to establish attainable goals with an overall solution.

- **PROLONGED ARRIVAL TO PROVIDER TIMES**
- **HIGH LEFT WITHOUT TREATMENT RATES**
- **UNACCEPTABLE TIME TO ADMIT & DISCHARGE TURNAROUND TIMES**

APPROACH

The medical director and team members approached four key elements to get the ED back on track.

1. Defining the Goal

Before the operational issues could be fixed, broad education was necessary for the department, and other key stakeholders, to know where the metrics currently stood versus the requirements. To succeed, setting a common standard was in order. The providers, nursing staff and executives were routinely made aware of what the requirements were and how to move forward to meet or exceed the standards. After establishing accountability and setting expectations, the team was able to hone in on the smaller details that make a big impact. For example:

- *What is the lab turnaround time?*
- *How long does it take to get a radiograph done?*
- *What are the barriers against writing an order to discharge a patient from the ED?*
- *What is keeping the order to admit a patient to the hospital from becoming an action?*

Answering these questions and dissecting current processes in place led the team to the next course of action.

2. ED-Hospital Alignment

Sometimes the smallest details make the greatest impact on day-to-day ED operations. After taking a closer look, a disconnect between the ED and inpatient areas during the admission process was discovered. In order for the ED to meet its goals, a new admission protocol was necessary to keep patients moving throughout the process.

At the time, there was a no-admit zone time period from a quarter till the hour to a quarter after the hour. When shifts were changing on the floor, all admission processes were put on hold, which meant patients were not able to move from the ED to an inpatient bed for 30 minutes, or more, in some cases. Patients lingered in the ED creating a back log which presented additional challenges for the department.

With the support of the inpatient nursing leadership and hospital administration, the no-admit zone time period was eliminated. Together, leadership and other key stakeholders implemented a new admission process. No matter the time of day or night, all patients were to be admitted within 30 minutes of the admission order being written.

This new standard resulted in tremendous change in decompressing the ED and allowed for more open beds so that new patients could be seen quickly.

3. Front-End Flow Implementation

With a new admission process in place and running smoothly, efforts were refocused to the department's front-end flow. Under the medical director's leadership, a Front-End Flow committee was developed. Key stakeholders included nursing staff, registration, environmental services, physicians, APCs, triage nurses and ED nursing administration.

With buy-in from all key stakeholders, a decision was made to immediately bed every patient that arrived to the ED, unless capacity was met.

Even if the patients were not being seen immediately, the idea was to have them in a place where evaluations could get started, labs could be drawn, EKGs could be performed and patients were continuously moving forward toward disposition. The team paralleled the process of the medical screening examination and triage. Previously done in sequential fashion, now a triage nurse and the APC perform a simultaneous assessment. This allows for more efficient acquisition of the information required to move the patient forward in the process.

While the task sounds simple, the impact was tremendous. The department compressed a process that might average 15 minutes or more, down to five minutes.

4. The Pivot Process

In a way, the ED is much like a theme park or distribution service, where large volumes of people or shipments need to be moved quickly through a process. The concept of queuing is part of what makes these large organizations so successful.

Referred to as the Pivot Process, the ED team, organized and implemented their own customized queuing process to improve flow. When patients cannot see an end in sight, they are more likely to leave without being seen or before ever completing registration.

Now, an experienced nurse armed with two vital signs (O2 sat & heart rate) and a chief complaint can make a decision about the triage level, which allows for the patient to move forward quickly rather than lingering at the triage site. When the ED is at full capacity, the patients go to one of two internal waiting rooms instead of returning to the main waiting area.

For patients, this provides the light at the end of the tunnel effect by moving the patient forward and eliminating retrograde flow, patients are empowered to have a stake in their destiny and are less likely to leave. For providers, the patients are more accessible in the internal waiting area where they can easily be retrieved for in-depth evaluation and to have lab and radiographic tests completed.

"We have 44 beds and as long as there are less than 44 patients, our goal is to never have a patient in the waiting room."
– Medical Director

RESULTS

While there were other small changes in day-to-day ED operations, these four key elements resulted in colossal improvements for the ED team. In October 2017, the ED achieved a level of success far beyond what was experienced in the prior 24 months.

Across the entire health system, 77 hospitals, 20 surgical hospitals and 460 outpatient centers, the ED ranked among the top 10 in three metric categories.

- **RANKED NO. 1 IN MEDIAN CARE COMPLETE TO ADMISSION – 34.7 MINUTES**
- **RANKED NO. 2 IN MEDIAN ADMIT LOS 192.9 MINUTES**
- **RANKED NO. 5 IN WALKOUT RATE – 0.75%**

In addition, improvements were seen in many other areas. In October 2016, the Time of Arrival to Time of MSE averaged 47 minutes and by October 2017 the average was 17 minutes. This was not an isolated improvement. Since October 2016 the reduction has been progressive and continuous.

From February to March 2016, the left without triage rate averaged 138 patients per month. By October 2017, only four patients left without being seen by a medical provider.

In January 2016 the average time to get a patient admitted was 334 minutes, which steadily decreased month-over-month, resulting in an average of 211 minutes by October 2017. This is more than a two-hour reduction in the amount of time it took to get a patient from the door to an inpatient bed.

In February 2016 the turnaround time to discharge a patient was 211 minutes. By October 2017 that number decreased to 144 minutes.

With great leadership and support from hospital administration, the ED team made tremendous improvements - many that exceed far beyond the initial goals. We are proud of our ApolloMD providers and honored to partner with a great team of hospital administrators, nursing staff, techs, registration and EVS that support one common goal.