MS²

Case Study

Community Hospital ED (36K visits)

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The Problem:

This 18-bed department was built to handle about 28,000 visits a year. Because of growth over the years, overcrowding and lengthy ED waiting times had become commonplace. The average Door to Provider time was around 70 minutes and lengthened to the 2.5-hour range at peak-times. In addition, the average Door to Discharge times was more than 180 minutes. The department had no Fast-Track space but 4 out of the 18 department beds were treated as such whenever volumes allowed. By the time the department's yearly volume was at 36,000, this practice had been outgrown.

Background and Approach:

Because the department had no Fast-Track, the ED handled a 100% of the daily patient load and there was no space to redirect flow. Because of overcrowding, and limited ED bed capacity, the functional capacity of the ED had to be increased by at least 40% to change performance and flow metrics in a meaningful way.

A decision was made to use alternative treatment areas to accomplish the necessary flow redirection and establish a Rapid Clinical Evaluation Unit to act synergistically with it. The former triage area was converted into provider evaluation areas and an adjacent storage room was converted into a processing area with evaluation tables. If providers evaluate a patient that does not require testing, they discharge them right from the Provider Evaluation area. If patients require ancillary tests or further treatment, they utilize the staging area to prevent unnecessary use of ED beds as long as discharge is anticipated. Chairs were also arranged outside of the staging area for patients waiting for X-rays or that do not require use of the evaluation tables thus, further increasing the overall capacity of the set-up. Patients were also registered either at the bedside or on their way out (Exit-Registration) to avoid registration from becoming a rate-limiting factor at intake. To obtain the most benefit from patient flow redirection the program was scheduled to cover the major backlog producing time of 9A to 11P. In addition, ancillary department interfaces were redesigned to support higher throughput and demand without downstream queuing.

Recommendations implemented:

1. Established a Rapid Clinical Evaluation (RCE) model of care that provide the ability to have patients evaluated by an ED provider within minutes of arrival.

2. Established alternative treatment and processing areas to care for lower acuity patients without placing them in Main ED beds for evaluation or disposition.

3. Revamped interfaces with ancillary departments to support the new operational ED model and created shared data gathering and reporting mechanisms visible to the entire organization.

4. Established the use of Exit-Registration to avoid registrations from becoming a rate-limiting factor at patient intake.

Results:

After implementation, the department was able to redirect 60% of the daily patient load through the alternative treatment areas. Door to Provider was decreased to an average of 7 to 10 minutes. In addition, Door to Discharge times were decreased to 100 minutes and the rate of patients leaving the ED unseen decreased from 3% to 0.3%.

The department was also able to establish a no ambulance diversion policy that increased ambulance arrivals by 33% and 150 more inpatient admissions came through the department each month. Active marketing and advertisement of the ER service was started and the department volume increased from 36,000 to 42,000 within less than a year. By the second year the department was seeing 48,000 patients without adding a single Main ED bed or degrading performance.