Improving ED CT Patient Flow

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Aim Statement
Increase percent of ED CT exams completed within 120 minutes from 61% to 71% by March 2019.

Background
Emergency Department (ED) visits have increased at twice the rate of the United States’ population growth, while the number of ED facilities across the nation has declined, resulting in widespread ED overcrowding. Overcrowding leads to delays in patient care, raises costs and creates patient flow challenges across the hospital system. Approximately 60% of our ED visits involve imaging, with CT as the most common imaging modality. As part of improving overall flow of patients through the ED, our team attempted to improve CT turnaround times.

Baseline Conditions
- EUH ED CT volume – 53 exams/day
- 60% of ED volume is between 11am to 11pm
- Capacity to meet CT demand lagged between 11am to 3pm

Takt Time Calculations

Tech Workflow Time Study

ED TECH STAFFING WEEKDAY

Number of Staff Required
Peak Cycle Time
Takt Time
# of Techs Required
# of pts/hr.

Number of Staff Required to Meet Takt = 2

ED Exams Completed in < 120 minutes - 24 hr.

11pm
Current Staffing = 2
10pm Short Staffed by 1
11pm Short Staffed by 1

# of Questions Pre Post % Reduction
Patient Facing 29 12 60%
Technologist Facing 28 20 65%

Actions/Tests of Change

Test of Change 1 – Create Checklist and Standard Work for CT Patient Flow
Key Drivers Impacted – Improve patient communication and Prioritize CT exams.

Test of Change 2 – Revise CT Aortic Dissection PowerPlan
Key Drivers Impacted – Remove barrier to first pass yield and Eliminate non-value add work

Test of Change 3 – Optimize Contrast Screening Form
Key Drivers Impacted – Eliminate non-value add work

Results

ER CT Exams Completed in < 120 minutes - 24 hr.

Achieved goal in June 2019

Median TAT <30 minutes since February 2019