



Emergency Department Triage Improvements Reduce Patients Leaving Without Being Seen



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Context

Harbor-UCLA Medical Center is a public, not-for-profit hospital in the South Bay of Los Angeles serving a working-class population, with 76% covered by Medi-Cal and 8% uninsured. The Harbor UCLA Emergency Department is busy and crowded, caring for 85,000 patients in 2017.

Problem

ED Triage in early 2015 was characterized by large amounts of rework and waste. This resulted in a door to provider time of over 100 minutes and more than 13% of patients leaving without being seen (LWBS). For comparison, the national and California averages for LWBS are 1.5% and 2.6%, respectively. A multidisciplinary improvement team set out to reduce the time from door to provider and the rate of LWBS.

Aim

Reduce the rate of LWBS to 2% by December 2016

Analysis

Multiple factors contributed to the high rate of patients leaving without being seen. The triage process was characterized by significant waste and rework resulting from sequential care processes. Nurse practitioner triage scheduling was uncoupled from the diurnal nature of ED patient arrivals. The nurse triage form had bloated over the years, resulting in a lengthy questionnaire. A number of changes were made addressing these inefficiencies in addition to targeting staff awareness of system performance.

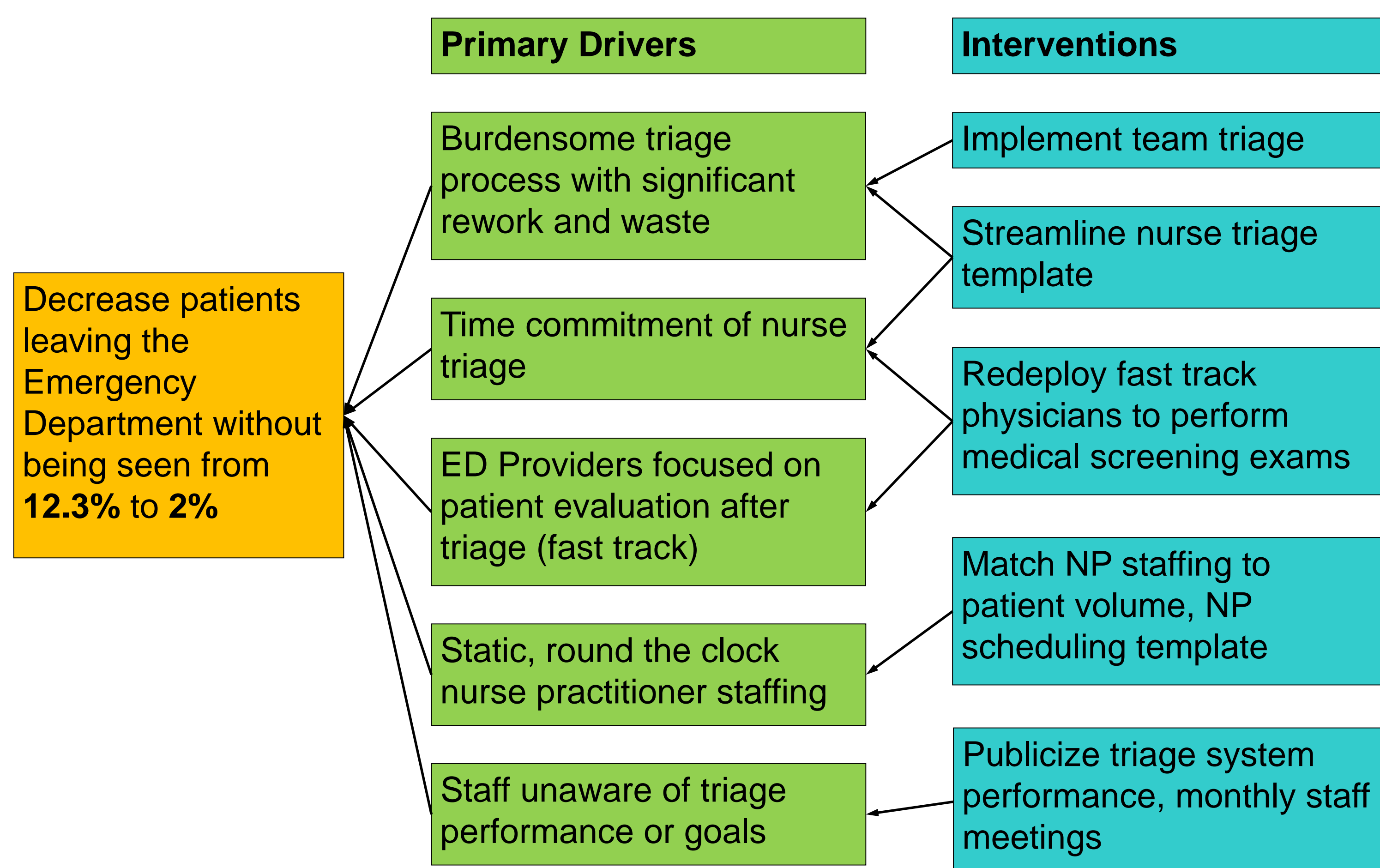


Figure 1. Driver Diagram

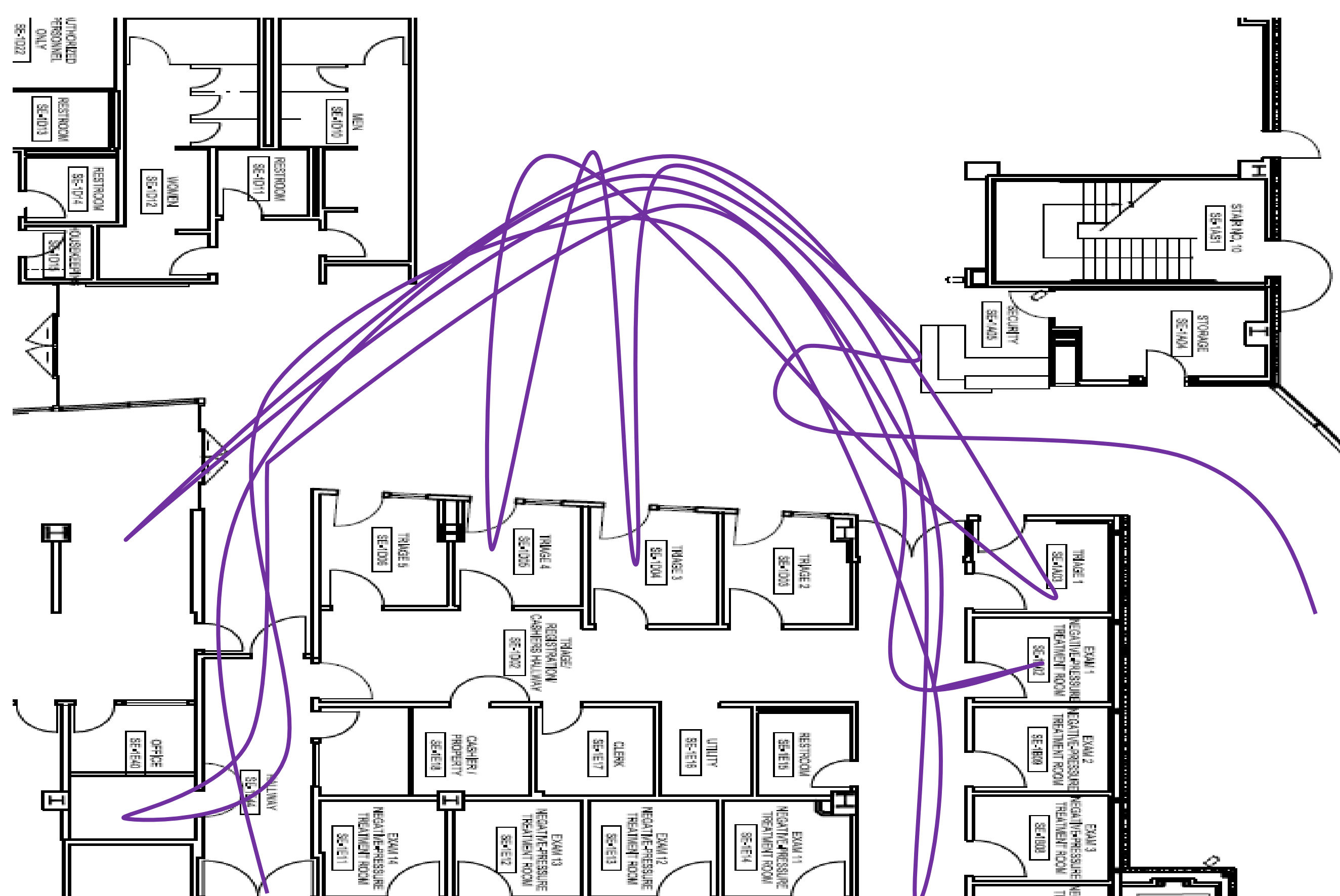


Figure 2. Pre-Intervention Patient Movement through Triage

Results

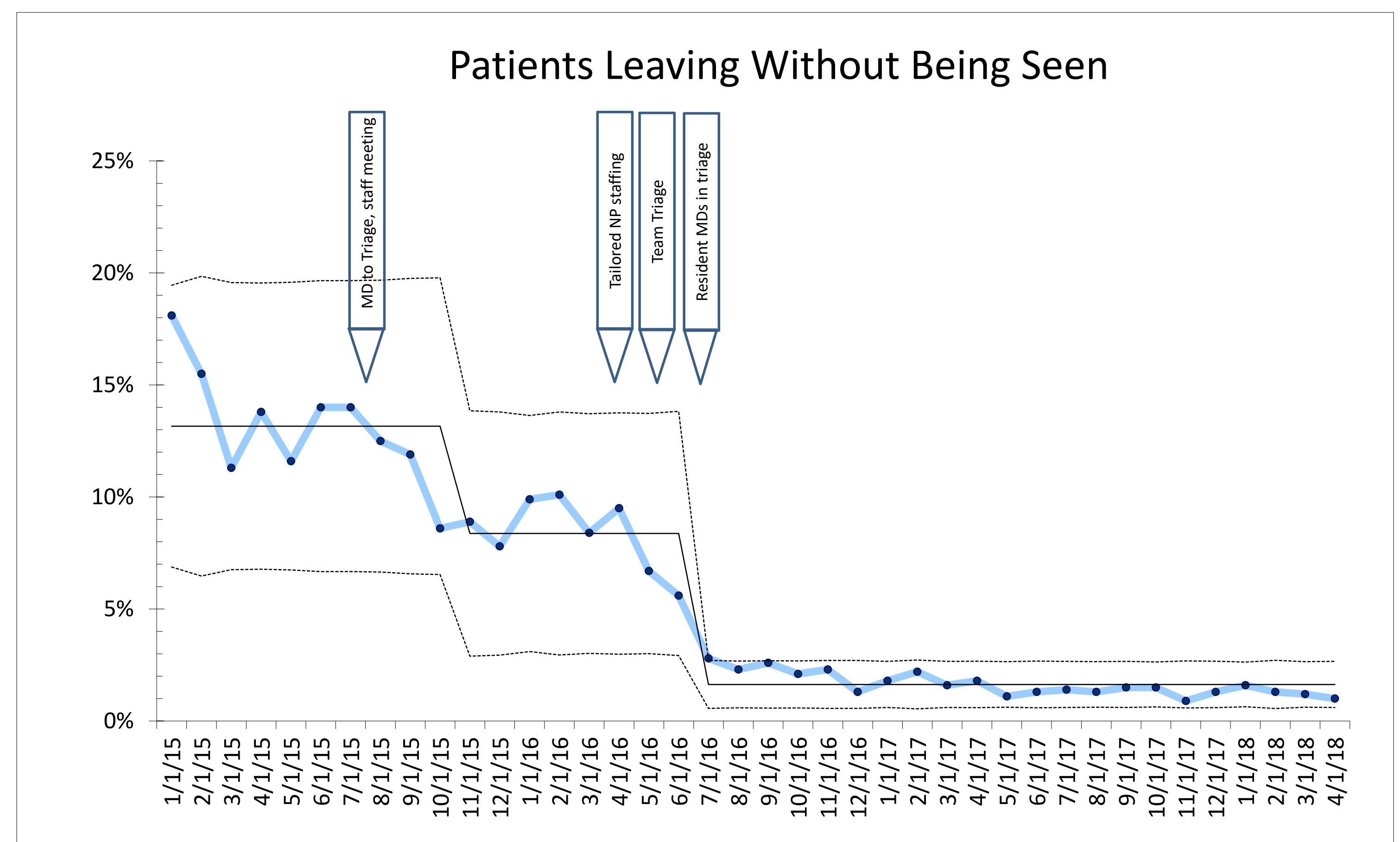


Figure 3. Shewhart Chart of Patients Leaving Without Being Seen

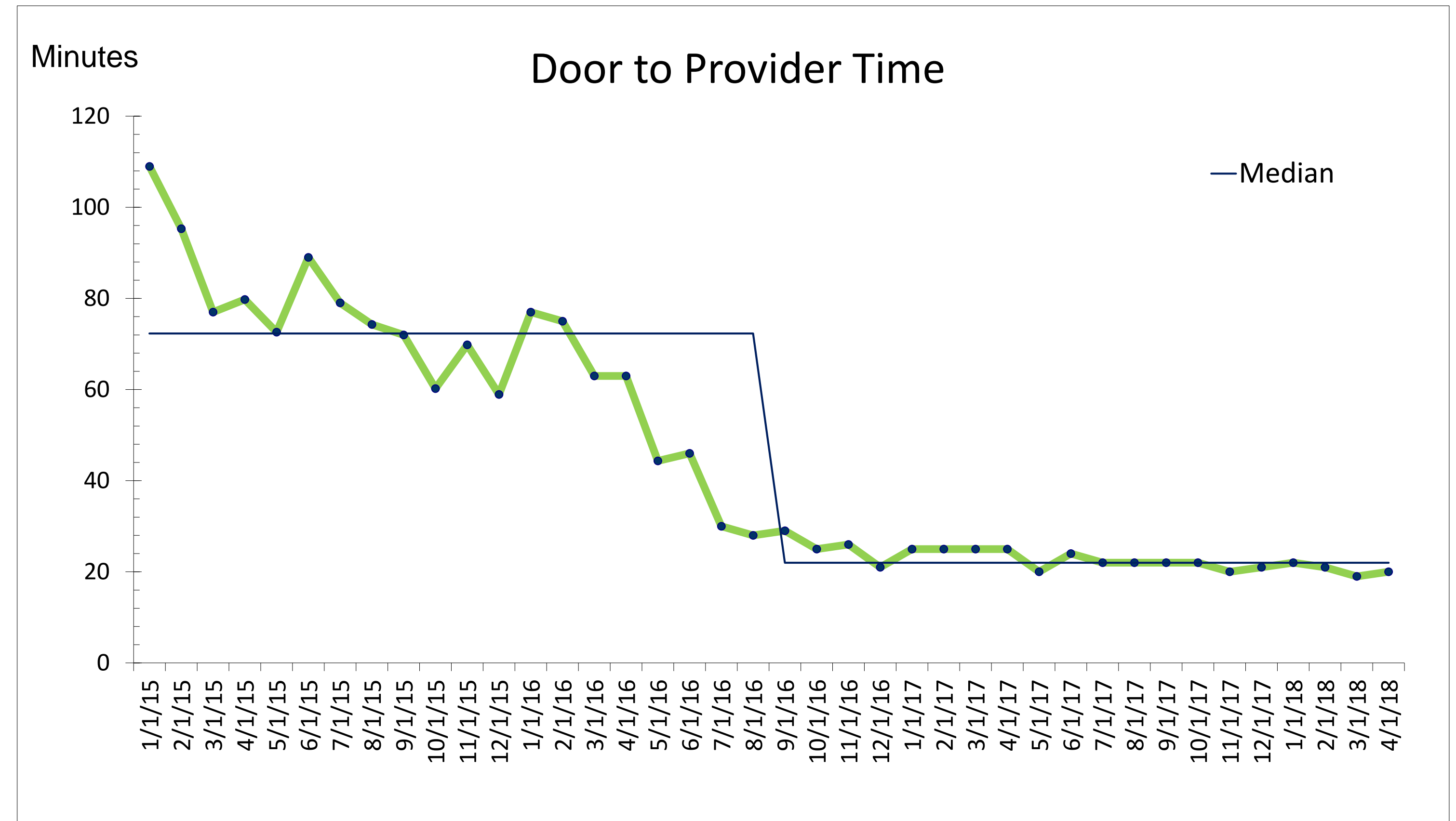


Figure 4. Run Chart of Door to Provider Time

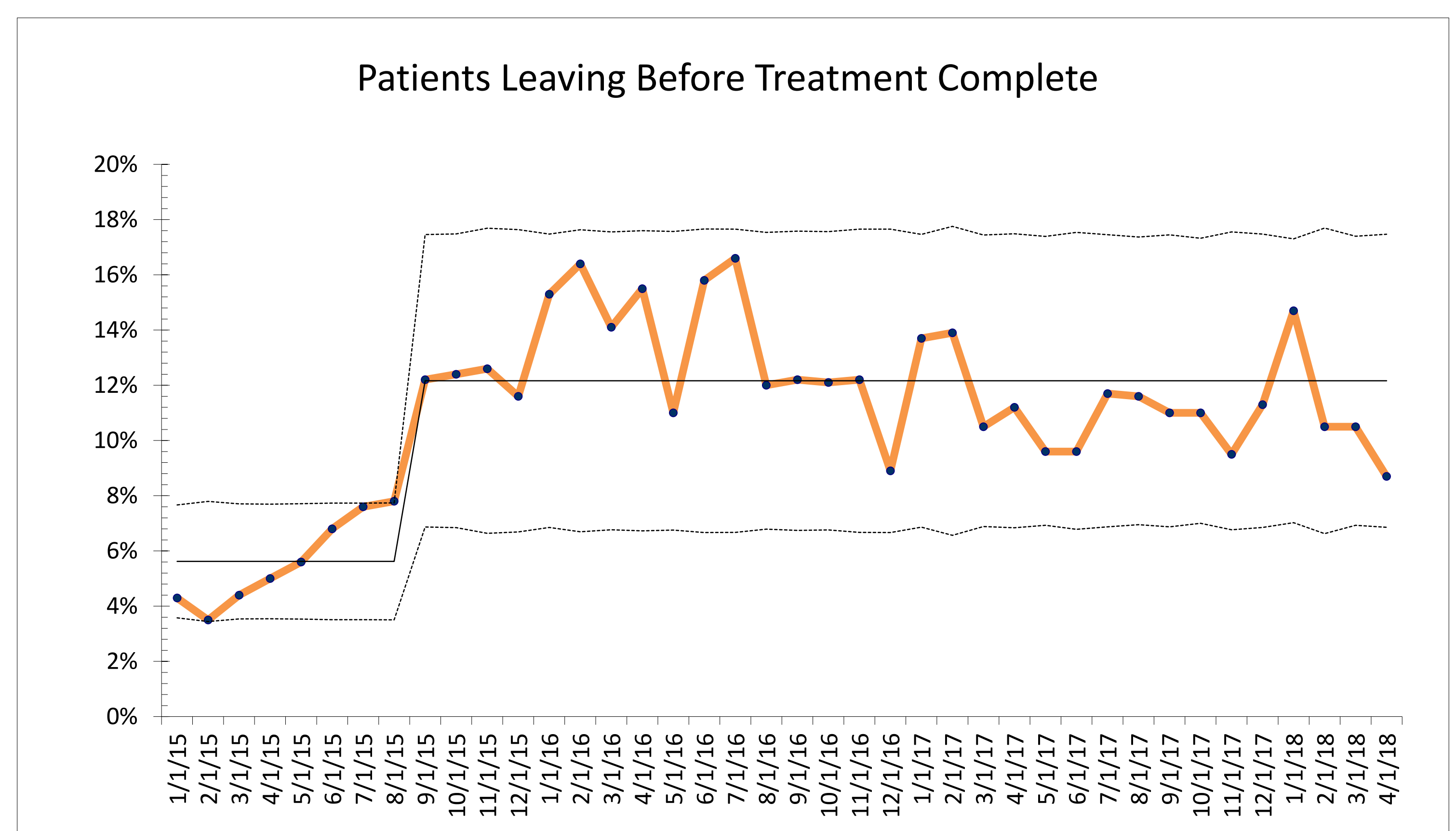


Figure 5. Shewhart Chart of Patients Leaving Before Treatment Complete

Discussion

The interventions reduced waste in the triage process and aligned resources with patient needs. This resulted in substantial and sustained improvements in the time from door to provider and the rate of LWBS. These improvements allowed for an additional 6,349 patients to receive initial evaluation in 2017 compared with 2015, reassignment of 2 nursing assistant FTEs, and elimination of one NP night shift and 12 daily hours of RN overtime. Importantly, the ED was not prepared for the increased volume of patients receiving triage, which resulted in a significant increase in the rate of patients leaving before the completion of treatment. Further improvement efforts are aimed at increasing capacity to accommodate these patients.