First case patients arrive at Massachusetts General Hospital’s (MGH) main lobby between 5:00-5:30am to check-in for surgery at the Center for Perioperative Care (CPC). The CPC building does not open until 5:30am (see Figure 1). Patients who arrive before 5:30am must wait in the main lobby until 5:30am. At 5:30am, 20+ patients and their families proceed to the elevators and wait in the line to check-in (see Figures 2 and 3). Patients experience very long wait lines to be processed for surgery, and CPC staff experience an overwhelming workflow until the majority of first-case patients are checked in and processed.

1. Improve Patient Experience
   i. Reduce patient processing time and shorten time waiting in lines
   ii. Reduce patient anxiety on the morning of surgery

2. Reduce Delays
   i. Reduce first case delays resulting from prep and transport delays
   ii. Prevent delays in later case starts resulting from first case delays

3. Increase Nursing and Admin Efficiency and Simplify Process
   i. Reduce the time OR staff spend waiting for patients to arrive
   ii. Reduce CPC check-in staff’s overwhelming workload between 5:30 and 6:30

A time and motion study was conducted in June 2015 to identify bottlenecks in the current process. We created a current state process map (see Figure 4) and in collaboration with CPC staff and leadership developed a future state process map. In the pilot a CPC administrator checked in patients in the main hospital lobby from 5:00-5:25am (see Figure 6), and then returned to the CPC main desk to continue checking in patients. Tools to support the CPC admin were created including: instructions; conversation scripts; and colored patient instruction cards. Sometimes, patients who had a later case surgery also arrived at MGH prior to 5:30am. To ensure that the check-in process was fair and timely for patients who were scheduled for 1st case surgery, we created colored cards to triage patients who checked in early (see Figure 5). The cards ensured CPC staff could easily identify patients based on time of their surgery. Finally, we communicated and collaborated with multidisciplinary teams throughout the hospital, including CPC leadership and administrative staff, security staff, and main lobby support staff, to ensure all groups were aware of and supportive of the pilot and redefined process.

Within Scope of Control

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**Evaluation**

Time-Motion studies along with time-stamps documented on EMR were collected and analyzed. Data was collected for eight days in July to measure current state, along with eight days of data during the pilot. We also evaluated the success of the pilot based on visual observations, for example, shorter lines at 5:30am and a less overwhelming workflow. Our evaluations included feedback from staff on their experiences with the new workflow, and from patients on their satisfaction.

Results and Positive Outcomes

We observed the greatest reduction in processing time on Mondays; on average, patients were processed 9.5 minutes faster (see Figure 7). An overall average reduction in processing time of 4 minutes was observed for each weekday. An average of eight patients were checked in prior to 5:30am in the main hospital lobby each morning, allowing the morning shift CPC staff to experience a smoother workflow. We observed a number of additional positive outcomes of the pilot, including a reduction in time waiting to check in. An improvement in patient satisfaction was also reported. The successful pilot process was suggested by a CPC staff member, and our adoption of her suggestion led to enhanced job satisfaction and engagement between administrative staff and leadership. Feedback was sought from CPC staff resulting in collaboration throughout the development and implementation of the pilot.

Recommendations

Based on our evaluations and results of the pilot, we recommend making the early check-in process standard for first case surgery patients. We suggest designating a member of the CPC staff to conduct future evaluations of the CPC process and to reassess the impact of the new process in 3-4 months. Other bottlenecks were identified during the initial shadowing process, such as in the transportation of patients from the CPC to the operating room. These bottlenecks can be targeted next as areas for improvement. Finally, we recommend continuing to solicit feedback and suggestions from patients and staff in order to continue improving the process and working towards achieving our goals of improving patient experience, process and efficiency, and reducing delays in surgical start time.