ACADEMY FOR EXCELLENCE IN HEALTHCARE

IMPACT ASSESSMENT PAPER

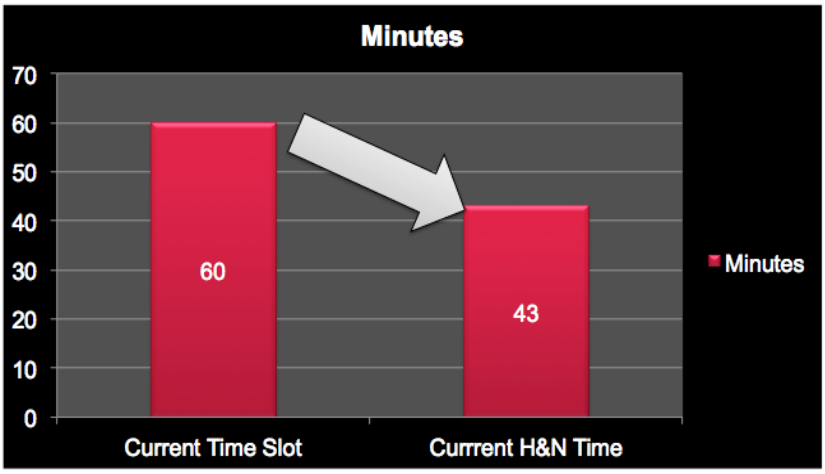
Executive Summary

Improved CT Simulation and Patient Access at The James

It's not unusual in healthcare for unique processes or equipment with finite capacity to be a constraint that needs to be efficiently managed for the sake of patient care and for optimum return to the hospital. This was the case for CT Simulation at the Department of Radiation Oncology at The Arthur G. James Comprehensive Cancer Center and Richard L. Solove Research Institute (The James Radiation Oncology).

In 2014, the Radiation Oncology department had daily average of 150 treatment visits, with a daily average of 9.5 patients per day for a CT Simulation (CT Sim). In order to keep pace with patient demand for the simulations, the department's hours of operation were extended to 9 hours per day in 2013, with patients scheduled in 60-minute CT Sim time slots. The problem was that the actual time needed for a CT Sim averaged only 43 minutes per patient. Radiation Oncology, which moved to a new facility in December 2014, projected CT Sim usage will increase to 13.3 patients per day, making improvements necessary: goal of 45-minute time slots occurring within an 8-hour day.

CT Simulation Scheduled Time vs. Time Required



Source: The James Cancer Hospital, Radiation Oncology

A cross-functional improvement team attended training at the Academy for Excellence in Healthcare at The Ohio State University in August 2014. The team examined process data, such as the time a patient was

physically in the scanner room, to find factors affecting the long CT Sim times. The team identified:

- Different disease sites (e.g., head, neck) took different CT Sim times, but all patient slots regardless of disease site were scheduled for 60 minutes.

- Up to 80 percent of scans did not start on time, which contributed to scheduling excessive time slots.

- Lack of standard work for various steps of the process, such as standardization of orders, contributed to delays and late starts. For example, some physicians placed CT Sim orders in advance, while other patients waited in the CT Sim room for a physician order or waited because of missing or incorrect information on the order.

The improvement team also determined that the steps of immobilization, by which lasers and devices are used to ensure a precise position for patients prior to the simulation, could be removed from the CT Sim room. The team split the one process into two steps: preparation of immobilization devices in an induction room and the CT Sim in the simulation room — they removed the internal setup from the more valuable resource to improve set-up times. While CT Sim occurs for one patient, another patient can be prepared.

Read the full study of The James Radiation Oncology project, which illustrates how hospitals can optimize a finite-capacity process, function, or piece of equipment. The Radiation Oncology improvement team identified ways to improve the time available for the CT Sim process by removing delays prior to CT Sim; having patients fully ready, including information, when entering the simulation room; identifying and scheduling for a mix of CT Sim times (rather than scheduling one common duration for all patients); and separating supporting and setup activities from the actual CT Sim process time.

About the Academy for Excellence in Healthcare: AEH blends in-person class time with hands-on project work, interactive simulations, and recurrent coaching, all aimed at helping healthcare teams spark actionable change at their organization. To learn more about AEH, contact Margaret Pennington, Faculty Director, or Beth Miller, Program Director.