

ACADEMY FOR EXCELLENCE IN HEALTHCARE

IMPACT ASSESSMENT PAPER

Executive Summary

Reducing Surgery Wait Times at Covenant Children's

Covenant Children's, a full-service pediatric hospital in Lubbock, Texas, wanted to reduce excessive wait times for pediatric day surgeries. Approximately 225 pediatric surgeries are conducted at Covenant Children's monthly by six physicians in 11 operating rooms (ORs), and many patients and their families would wait three to four hours for scheduled surgeries to begin. The hospital would routinely issue service-recovery tickets (gift cards) to families to ease their dissatisfaction.

The physician determines the need for surgery, and the physician's office informs scheduling to make the surgery appointment. Surgeries ideally are coordinated by Surgical Assessment Services (SAS), which undertakes a range of pre-surgery activities, such as pre-registration and an RN pre-operative assessment. Many SAS tasks occur up to 30 days prior to the surgery date. On the day of surgery, the patient arrives at admitting for a brief check-in and then to day surgery where the patient is evaluated for readiness, medications are reconciled, and any pre-op medications begun prior OR. After surgery, there is a brief period in recovery, back to day surgery, and then typically the patient goes home that day.

A cross-functional team from Covenant Children's, which included Dr. James Gutheil, surgeon in chief, attended training at the Academy for Excellence in Healthcare (AEH) at The Ohio State University. The team learned about lean techniques that could improve day-surgery scheduling, such as A3 thinking, standard work, time studies, and value-stream mapping. The AEH training helped them to assess day surgeries from the view of patients experiencing the process rather than a surgeon-centric perspective.

Back at Covenant Children's, the team observed the process, documented their observations in a process-flow map, analyzed the issues, and identified causes for long wait times:

- *Batching of patients at the start of each day:* Many surgeons scheduled all of their patients to arrive first thing in the morning; some patients were scheduled with a six-hour wait.
- *Underutilization of SAS:* A majority of surgeries were scheduled without SAS: average admitting time was 5 minutes and surgery wait time was 42 minutes with SAS, vs. 20 minutes for admitting and 242 minutes of wait time without SAS. Some physicians were unaware of SAS or reluctant to

use the department. Without use of SAS, some patients would have surgeries cancelled due to insurance or lab-work issues that were detected on the day of surgery.

- *Non-standardized pre-operative medication process:* Different anesthesiologists service the hospital, each with sedative preferences, and these variations also contributed to delays.

Goals were set for a Dr. Gutheil control group to reduce patient wait times from an average of 242 minutes to 60 minutes and to improve first-case on-time start rates from 38 percent to 80 percent. The team identified countermeasures that the control group of Dr. Gutheil patients would pilot:

- Improve start times for the first surgeries of the day.
- Develop and implement a scheduling worksheet that would help to stagger surgery patients.
- Commit to SAS for all surgery patients.
- Reconfigure patient movement from waiting to the day-surgery area and ORs.
- Standardize pre-op medication process.
- Improve the use of information technologies and minimize computer-screen processes.

All of Dr. Gutheil patients were soon coordinated by SAS and scheduled on the staggered system, which helped to lower surgery wait times from 217 average minutes to *115 minutes*; wait times for first cases of the day were as low as 69 minutes. None of Dr. Gutheil's patients received service-recovery tickets.

Dr. Donald Gifford, a dentist, also was involved in the project, and his patients were monitored as a non-control group. After experiencing some issues with the new process and use of SAS, he, too, embraced the changes and wait times for his patients fell from 190 minutes to 57 minutes. As with Dr. Gutheil's patients, no service recovery tickets were issued.

The improvement team took other actions to reduce wait times — such as moving the location of the waiting room and standardizing inventories and activities in storage, the OR, and recovery — and they continue to examine how to improve the pre-op medication process and IT process. Team members believe the new day-surgery approach can be rolled out to other areas, such as endoscopy and MRI.

[Read the full study of the Reducing Surgery Wait Times project](#), which provides insights on changing a major process involving the critical role of physicians/surgeons: having a highly visible and engaged individual in that role using new practices and demonstrating the new process helps to break down decades-old, physician-centric behaviors. The Covenant Children's project also reveals key elements to overcome resistance to change — sound data, ongoing communication and education, and tools to assist support staff (e.g., scheduling spreadsheet). The improvement team's work also shows how much can be accomplished when lean practices are understood, embraced, and deployed by those doing the work.

[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.