



CUSTOMER OVERVIEW

University Hospitals
Cleveland, OH, USA

- Private, not-for-profit, academic health system
- 2,240 beds and 128 ORs
- 150,000 surgeries annually
- 12 community medical centers, 40 health centers, and 1 joint-venture hospitals
- 4,700 total providers and 25,000 non-physician employees
- \$4 billion total annual revenue

Increasing Block Utilization and Optimizing Case Mix to Drive Bottom-Line Revenue

Hospital IQ’s powerful Perioperative Solution enabled **University Hospitals** to analyze, predict, and help manage OR demand, capacity, and staffing. The Perioperative Solution gave leaders the time and insights to:



Increase OR block utilization by 5% within the first six months by reallocating block time from low utilization surgeons and service lines to those needing additional time.



Develop and implement a successful service-line management model for the OR using a distributed management reporting framework that enabled autonomous management of staffing, supplies, and OR block allocation.



Implement a transfer policy for surgical cases that generated increased surgical case volume (by an average of 61 cases per month) and reduced cost per surgery by shifting lower-acuity cases to three ambulatory surgery centers to create capacity for higher-acuity cases at UH’s flagship hospital.



Generate \$17 million in contribution margin for the hospital as a result of these operational changes.

“ We knew we had critical information in our own data that we could leverage to improve performance and drive innovation throughout our system, but we didn’t have the tools to look at that data and take action on it before Hospital IQ. ”

Dan Towarnicke
Vice President, Perioperative Services
University Hospitals Cleveland



University Hospitals' Perioperative Challenge

University Hospitals Cleveland (UH), one of the nation's leading healthcare systems, faces the same challenge that every major hospital confronts: how to deliver increasingly complex, high-quality healthcare to a diverse population efficiently and economically.

In 2017, UH's leadership embarked on a value improvement program (VIP) designed to improve quality while saving \$400 million over five years. They established an Operations Excellence Department to identify ways to improve care, reduce waste, grow volume, and expand into new service lines such as precision medicine. The hospital established key performance improvement indicators for each department. Goals for the perioperative department included increasing surgical volume, increasing the volume of complex cases performed at the main campus, and better utilization of surgical blocks and rooms.

Hospital leaders knew they had a wealth of data within their own records but their existing systems couldn't provide the information department leaders needed to predict operational problems and implement improvements. The hospital had no way to take a system-wide look at how its surgeons and ORs were performing or to foresee the impact of future changes.



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Hospital IQ for Perioperative Solution

University Hospitals Cleveland turned to Hospital IQ's Perioperative platform to help transform its surgical operations to achieve the following objectives:

- **Implement Micro ORs.** Under this management model, each service line administrator is assigned a subset of ORs, staff, and other resources, and empowered to manage all aspects including block allocation, staffing, and supplies.
- **"Decant" OR cases.** UH leadership wanted to open up more capacity for complex surgeries at the main campus by shifting lower acuity and outpatient surgeries to lower-cost ambulatory surgical centers in the system.
- **Improve Block and OR utilization.** Hospital leaders wanted a clearer picture of OR block utilization patterns so they could see where utilization could be improved by reallocating block time from low utilization surgeons and services to those practitioners and services that needed more OR availability.
- **Staff to Demand.** UH sought to improve its shift schedule and staffing process to more accurately align the staff to the surgical demand and mix, and to better predict changes in staffing needs as volume changes.

Benefits Achieved and Value Created

Hospital IQ's Perioperative Solution enabled University Hospitals to implement the service-line management model by analyzing historical data, showing which service lines were fully utilizing their surgical blocks and which were not, for example. This revealed how much block time to allocate to each service line. In addition, it enabled service-line leaders to identify and proactively reallocate block time that would have otherwise gone unused. As a result, surgical volume grew by more than 60 cases per month.

The Perioperative Solution also guided UH's surgical transfer ("decanting") efforts. With the analytics it provided, UH was able to successfully change its mix of surgeries, moving lower-acuity cases to the appropriate community ORs while creating space for additional high-acuity cases in the main ORs. This innovation improved the hospital's case mix index by 15 percent in one year, improving reimbursements and generating higher revenue per surgical hour.

In addition, by applying artificial intelligence and machine learning to the hospital's own data, Hospital IQ for Perioperative helped UH analyze current block utilization patterns, showing where utilization of blocks by individual surgeons could be improved by reallocating block time from low utilization surgeons and services to those practitioners and services that needed more OR time. With the insight provided by the Perioperative Solution, the hospital improved its block utilization by 5 percent in the first six months after launching Hospital IQ.

Using Hospital IQ staff planning tools, perioperative leadership was also able to quantify the impact of proposed staffing changes and, as a result, overhaul the staffing grid and streamline the staff assignment process, which improved staff satisfaction and labor productivity. What historically had been a manual, unscientific process that had taken weeks of staff time now requires just a few hours per month.

By June of 2018, UH's perioperative department improved its direct contribution margin to the hospital by \$17 million total, with \$10 million of that resulting from additional inpatient volume generated by surgical patients who remained in the hospital following their surgery.

About Hospital IQ

Hospital IQ is a team of industry veterans who are passionate about using their collective knowledge and experience to help hospital leaders transform operational practices and improve performance – and deliver the best patient care to the most people.

