

DIGITAL TRANSFORMATION OF CORE OR PROCESSES AT



20+

Health Systems

1000+

Operating Rooms

\$500K

ROI per OR per Year



Problem

OhioHealth is a family of not-for-profit hospitals and healthcare facilities in Central Ohio. Serving patients since 1892, Riverside Methodist Hospital in Columbus, Ohio, is a 1,059-bed teaching institution and the largest hospital in the OhioHealth system. The flagship hospital shares the OhioHealth mission “to improve the health of those we serve”. It is recognized locally, regionally and nationally for quality healthcare and consistently ranked one of the nations best hospitals.

In trying to increase access to the operating room and accountability for the use of allocated block time, the Surgical Services Leadership Team had to consistently balance surgeon satisfaction with a focus on achieving operating metrics (volume, utilization, growth). The leadership team perceived there to be significant operating capacity and unused block time, but had little insight into where the opportunities existed. Furthermore, previous block management approaches, based on broken metrics like block utilization, made it challenging to hold surgeons accountable for unused block time. In order to drive the right outcomes at Riverside, the leadership team knew they needed a solution with embedded predictive and prescriptive analytics that would help transform core operational processes.

Solution

The Surgical Services Leadership Team partnered with LeanTaaS to implement iQueue for Operating Rooms. iQueue’s **Exchange** and **Collect** modules helped transform traditional business operations at Riverside to drive increased access and enhance accountability for the use of allocated block time:

Exchange identified and exposed the inventory of open time to surgeons and their clinic schedulers. Based on historical booking patterns, **Exchange** was able to identify surgeons who had not booked cases into their block and proactively remind them to release potential unused time. After inventory was exposed, the “OpenTable” feature allowed for immediate access to available operating time for surgeons who did not have allocated block or needed additional operating time.

Collect provided the leadership team with a surgeon centric metric to evaluate the performance of all block owners. The module mined patterns of OR usage by block owner and identified portions of time that could truly be repurposed or “collectable”. It allowed the leadership team to repurpose unused block time without impacting surgeons existing case volume.

Results

Less than 6 months into the partnership, OhioHealth Riverside Methodist Hospital reported both increased capacity, access and accountability.

211,000

Minutes of capacity released through Exchange

(Equal to more than 422,000 minutes of reclaimed capacity annualized)

62,000

Minutes of operating time requested through Exchange (50% of top beneficiaries were surgeons without block time)

(Assuming a 60% utilization, 62k minutes corresponds to ~\$5.58 million in revenue)

130

Number of blocks identified using Collect

(Opening a strong opportunity to increase share of wallet with non-employed physicians)

12

Number of blocks a month repurposed using Collect

(Creating opportunity to re-allocate to new and existing surgeons)

Problem

UCHealth's hospitals and clinics have been trusted health care destinations for generations of Coloradans. Today, based on four consecutive years of recognition of its superior nursing processes and quality patient care from the American Nurses Credentialing Center and its ranking as one of the top 15 hospitals in the country by US News and World Report, UCHealth hospitals are uniquely positioned to meet the health care needs of families throughout the Rocky Mountain region and the entire United States.

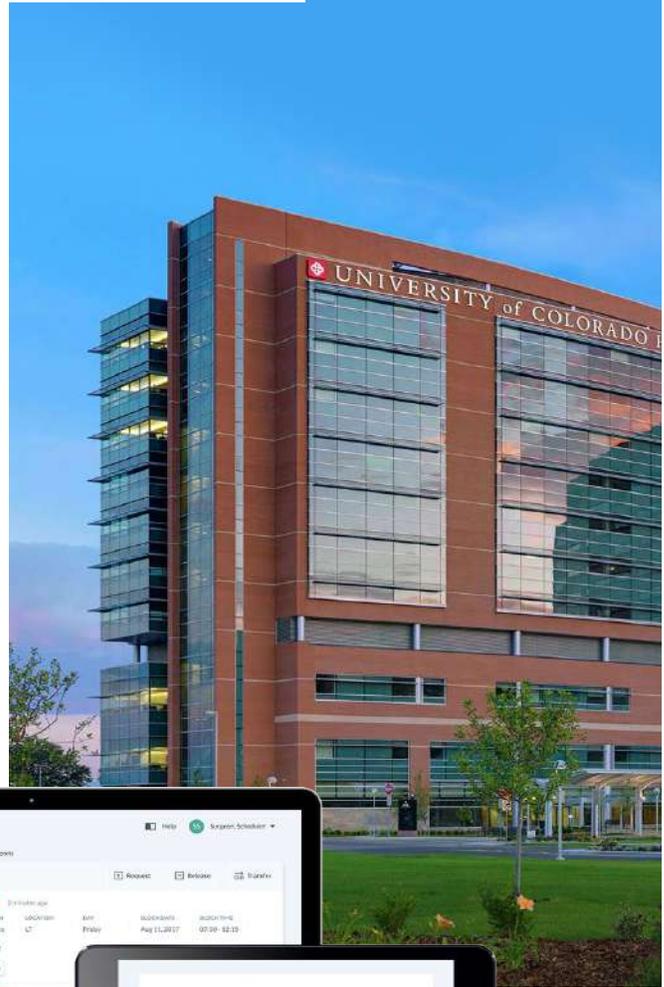
Previous rapid improvement events focused on first-case-on-time starts and turnover times had not significantly improved utilization in a substantive, sustainable manner. Leadership knew their volume was likely to continue to increase before new ORs could be built. Feeling a sense of urgency and pressure to increase OR utilization with a scalable approach, UCHealth turned to LeanTaaS, a partner with whom they had worked with to improve operations in its 10 infusion centers.

Solution

UCHealth partnered with LeanTaaS to deploy iQueue for Operating Rooms' Exchange and Analyze modules throughout 25 inpatient and 8 outpatient ORs at their metro Denver location at University of Colorado Hospital. After seeing the impact those two modules had on improving their utilization, UCHealth extended its use of the solution to its other community hospitals and ambulatory surgery centers. iQueue for Operating Rooms' modular approach allows healthcare providers the flexibility to deploy modules individually or in any combination.

With access to data-driven performance metrics and the ability to release and/or request block time without an endless series of phone calls, emails, and faxes, UCHealth surgeons have enthusiastically embraced iQueue for Operating Rooms.

uchealth



Results

47%

Median increase in blocks released per month

10%

Earlier block releases

4%

Increase in OR utilization

\$400k

Estimated additional revenue per OR per year



Problem

MultiCare is a not-for-profit health care organization caring for the Washington State community for well over a century. Consistently ranked as one of the nation's Most Wired health care organizations by Hospitals & Health Networks magazine, MultiCare is committed to providing outstanding care to residents of the Pacific Northwest through its eight hospitals, as well as through its robust network of primary, virtual, urgent and specialty care services.

MultiCare schedulers, administrators and department chairs were burdened with reconciling the needs for more OR access and the day-to-day constraints limiting surgeon satisfaction. Leadership was also aware that the prerequisites for attracting new surgeons and accommodating those already hampered with a significant backlog was reaching a tipping point. MultiCare leadership needed a scalable, cost-effective solution that would address these challenges, maintain their innovative brand and ensure a strong return on investment. MultiCare turned to LeanTaaS, with whom they had worked to overcome challenges in their MultiCare Tacoma General Hospital Infusion Center.

Solution

Working with their LeanTaaS counterparts, MultiCare executives and physician leadership initiated a pilot program to:

- Reduce the number of fully blocked operating room schedules
- Accommodate new surgeons and day-of add-on cases
- Eliminate surgeon case backlogs

In February 2018, MultiCare deployed iQueue for Operating Rooms' three modules:

- **Exchange**, for releasing and requesting open time via any web browser, mobile or desktop
- **Collect**, for reviewing the real-time block supply table, and
- **Analyze**, for immediate reporting of OR utilization.

Less than four months following the pilot's launch, the results revealed that 75 active clinic schedulers and over 77 surgeons – out of the ~100 active – had participated in an Exchange transaction. Within the next several months, iQueue for Operating Rooms enabled thousands of block transactions and reclaimed millions of dollars of block time.

Results

Results extracted from first 4 months of pilot throughout 34 MultiCare Operating Rooms

50%

Of beneficiaries were surgeons without block time

(Drastically increasing total number of requests and overall share volume)

3X

Minutes released

(Allowing more than 93,000 minutes of OR time to be requested and reclaimed)

20+

Blocks reclaimed per quarter

(Enabling hundreds of new and existing surgeons to be afforded OR access per quarter)

35%

Fewer exclusively unused blocks

(Promoting higher OR utilization and department transparency)



Overview

Parkview Medical Center is a community hospital based in Pueblo, Colorado, offering general acute healthcare and behavioral health specialty services.

As a private, non-profit organization, Parkview is licensed for 350 beds and provides a full range of healthcare services including the region's only certified and verified Level II Trauma Center as well as the region's first certified Stroke Center.

Parkview Medical Center is the leader in cardiac, women's, emergency, and neurological services as well as behavioral health programs. As a vital healthcare source, Parkview's service area includes Pueblo County and 14 surrounding counties, which together represent 350,000 total lives.

Solution

Parkview Medical Center has always been a leading healthcare innovator in the Pueblo community, and in searching for an innovative solution to the problems they faced in their operating rooms, they partnered with LeanTaaS to deploy iQueue for Operating Rooms.

They initially launched the product in February 2018 for the 12 ORs on their main campus and saw the following results in their first year using iQueue:

15

blocks per month released

11

blocks per month requested

21

day average block release lead time

20%

decrease in minutes from entirely unused allocated blocks

Problem

Parkview Medical Center faced a series of challenges that contributed to decreased efficiency in their operating rooms. These included:

- Inaccurate performance metrics due to non-standard EHR workflows. The process of compiling and validating manual reports was far too cumbersome, and as a result, there wasn't a credible set of KPIs that could be used to make decisions.
- No existing mechanism to right-size block time. Block utilization data was not credible, and prevented the OR Committee from being able to identify low-performing block owners. This made it difficult to find additional OR time for physicians with growing practices, as well as for new physicians.
- Limited access to available open (first come first serve) time that required several back and forth phone calls with OR scheduling. This would result in affiliated surgeons potentially losing potential patients to other neighboring markets.

Each of iQueue for Operating Rooms's three modules has provided tremendous value for Parkview. The **Analyze** module has, for the first time, given the leadership team timely, actionable metrics based on credible data. Given the way that Parkview had set up their EHR, they weren't able to extract meaningful data from it. But through working with the iQueue team in the implementation phase, Parkview is now able to capture their key performance metrics as intended, and are able to understand the true nature of their OR performance.

The **Collect** module allowed Parkview to establish an independent block committee for block management, and gave them a powerful, surgeon-centric metric for right-sizing block allocation in the form of collectable time. With collectable time, Parkview was able to make data-backed decisions about which block owners they should take time away from in a way that didn't impact existing case volume.

Finally, the **Exchange** module has provided visibility into the inventory of open time in the OR which has made it far more liquid and accessible. iQueue has significantly streamlined the scheduling process at Parkview, which has been a huge satisfier to both the physician and patient populations. In the words of Dr. James Caldwell, Medical Director of Surgical Services at Parkview: "**Exchange** has made the surgeons so happy, and we're getting patients in faster, so it has increased surgeon satisfaction, increased patient satisfaction, and has made the whole scheduling process outside of normal block time smoother. It has fixed so many problems and streamlined our systems so much."

Parkview was so happy with the results of their initial implementation that they decided to expand the scope of the tool to serve their outpatient and endoscopy centers, bringing the total number of ORs using iQueue for Operating Rooms from 12 to 20. The partnership between LeanTaaS and Parkview is poised to be a success in the years to come.



Problem

Dignity Health is the fifth-largest health system in the nation and the largest hospital provider in California. Its network of community hospitals spans California, Arizona, and Nevada and collectively includes over 250 operating rooms. Dignity Health's Sequoia Hospital in Redwood City, California, is a 12 OR facility that serves the larger Peninsula community. As is true with many community hospitals, Sequoia's surgeons are not directly employed by the hospital, and perform their surgeries across multiple facilities.

Sequoia Hospital partnered with LeanTaaS with the following operational challenges in mind:

- Surgeons felt that it was hard to find time to schedule cases at Sequoia, and would take their volume elsewhere.
- OR administration was unable to repurpose any poorly used block time.
- Perioperative leadership lacked visibility into what was truly happening inside the ORs, and how well they were being utilized.

Solution

Sequoia Hospital partnered with LeanTaaS to deploy iQueue for Operating Rooms' three modules across their 12 ORs.

The **Exchange** module has increased the total inventory of open time across the hospital and exposed that inventory to the broader surgeon population, allowing those looking for time to easily find it and bring more of their individual case volume to the hospital.

The **Collect** module has introduced a far more surgeon-centric way of thinking about how well block time is being used, and has helped OR administration re-purpose block time while leaving block owners enough time to meet their existing case volume. The methodology is now an established best practice for Sequoia Hospital's block committee meetings.

The **Analyze** module has enhanced the visibility of key performance metrics in the OR, vastly improving the management team's ability to monitor performance in a timely manner with credible data. It has also helped surgeons engage with their data, creating a culture of data-drivenness.

Results

The following results were calculated by comparing the six month period post-iQueue launch to the analogous six months in the previous calendar year.

10%

Percentage point increase in block utilization

3%

Percentage point increase in prime time room utilization

44%

Percentage decrease in minutes from entirely unused allocated blocks

2X

Increase in released minutes

Dignity Health Corporate Leadership saw the immense benefit of iQueue for Operating Rooms at the Sequoia location, and ultimately made the decision to implement the product across 35 of its hospitals and 250+ ORs in California, Arizona, and Nevada. The partnership between Dignity Health and LeanTaaS is poised to be a huge success in the years to come.

Problem

Portland-based Oregon Health & Science University – the only academic health center in Oregon – focuses on improving the health of all Oregonians and is dedicated to advancing the health sciences. OHSU's 16,000 employees concentrate on research to prevent and cure disease, on education that prepares physicians, dentists, nurses and other health professionals to succeed in an evolving health care environment, and on patient care that incorporates the latest knowledge and discoveries.

OHSU faced a shortage of available block time to allocate to new surgeons coming on-board at its South Operating Rooms (SOR) and Doernbecher Children's Hospital (DCH). Surgical services lacked visibility of available blocks; all block owners operated independently and there was no accountability for inefficient block owners. To compound matters, there was no "single source of truth"; unclear metrics and the lack of standardized release times for blocks fomented a lack of trust in the performance metrics by which surgeons were being evaluated. Before deploying iQueue for Operating Rooms, OHSU assumed – as many hospitals do – that the key to solving poor prime-time utilization patterns meant improving on their first-case on-time start delays and turnover times.

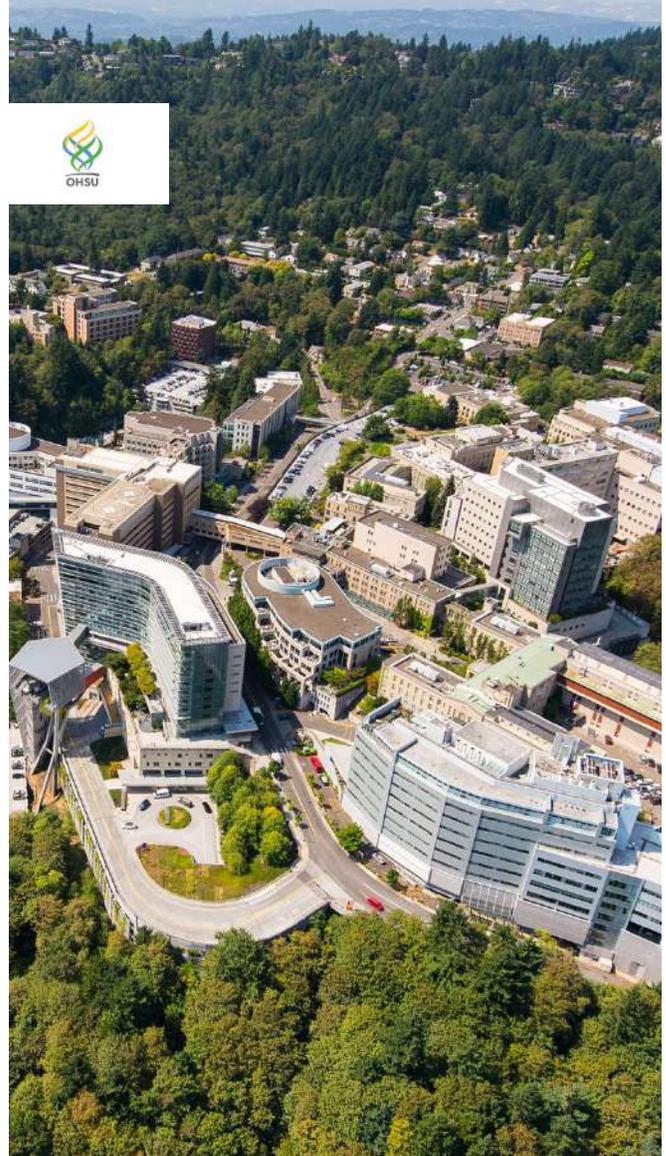
Solution

By deploying iQueue for Operating Rooms at SOR and DCH, OHSU hoped to improve access to the OR, increase the accountability of its surgeons for their use of their allocated time, and add transparency through a set of objective, data-driven performance metrics that eliminated ambiguity and helped surgeons develop trust in their key performance indicators. A major thrust of the effort was also to adopt a new framework for measuring OR utilization that focuses on Collectable Time – segments of time in which a case could have been scheduled but wasn't – and on scheduled downtime to drive OR utilization upwards.

Results

OHSU has experienced a 1% year-over-year increase in prime time utilization, a 5% increase in staffed room utilization, a 5% year-over-year increase in block utilization, and a corresponding 51% drop in completely abandoned blocks. Collectable Time has steadily decreased, as more surgeons now release time they know they can't use and other surgeons claim that open time for their cases. Now, for example, OHSU's Block Review Committees can put a block owner on notice and see dramatic improvement much faster than ever before. For example, a urology block owner was able to drop their collectable blocks from 6 to 3 in a matter of two months, using the data from iQueue to drive change in their scheduling practice. iQueue for Operating Rooms data now supplements existing infrastructure, helping perioperative leaders determine when to proactively close ORs when hospital is at high census.

As a collaborative partner with LeanTaaS, OHSU has taken an active role in working with the LeanTaaS team to brainstorm and develop new features, including an Availability Alerts management portal feature that automatically notifies surgeons when OR time matching their needs becomes available.



25

additional cases per month in prime time (Main Operating Rooms)

1%

increase in Prime Time Utilization

5%

increase in Staffed Room Utilization

5%

increase in Block Utilization

51%

reduction in abandoned blocks

What Your Colleagues Are Saying



iQueue is a far more scientific way of managing OR capacity and creating access to OR time, accountability for block time, and transparency into operating metrics. OHSU deployed iQueue for Operating Rooms in October 2018. From start to finish, the process took less than eight weeks. On day one of the go-live, there were more than 100 transactions to request and release OR block time. In fact, we have unlocked more OR time within the first week of using iQueue than we had in an entire year. The changes to our core processes for release and request, block rightsizing, and transparency into the metrics is exactly what we needed. This is the future of OR capacity management.



Dio Sumagaysay
Associate Chief Nursing Officer



It will allow for very immediate – almost 'live' – access to usage data related to my block time in the OR, and will let me see if I am effective in using the allotted time.



Jens Peter Witt, MD
Associate Professor, Neurosurgery-Spine



Exchange has made the surgeons so happy, and we're getting patients in faster, so it has increased surgeon satisfaction, increased patient satisfaction, and has made the whole scheduling process outside of normal block time smoother. It has fixed so many problems and streamlined our systems so much. Without Exchange, we'd be dead in the water again.



Dr. James Caldwell, MD
Medical Director of Surgical Services



I can't speak enough about the team. The iQueue team has been tremendous. There is one-on-one training with staff. They have reached out to every office, spoken to every staff member, given us resources to give them just in case. The iQueue team has been so responsive. There is continuously communication between my scheduler and the iQueue team in real time.

Roseann DiBrienza
Director of Perioperative Services

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