

CASE STUDY

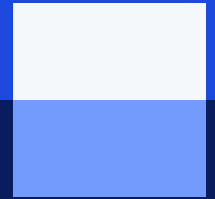
# Digital Transformation of Core OR Processes



47  
Health Systems

2500+  
Operating Rooms

\$500K  
ROI per OR per Year



## Background

Woman's Hospital is a specialty hospital that primarily serves women and infants in Baton Rouge, La., and the surrounding regions. In its unique model of care, most physicians on the medical staff at Woman's are independent providers not employed by the hospital. This adds an additional level of complexity to scheduling surgical procedures and increases the need for a system to coordinate this process among physicians in various independent practices. By implementing iQueue for Operating Rooms, Woman's Hospital aimed to improve accessibility to their ORs and provide visibility into available OR time.

Through implementing the Case Scheduling feature within Exchange, surgeons and their staff can submit requests for time including all relevant case details required to book the case. Initial feedback before launch indicated that several clinics prioritized time to submit their case over all other efficiencies realized through Case Scheduling. Surgeons were questioning whether the iQueue process would be faster than their old workflow which relied on calling the OR scheduling team directly.

In coordination with the Woman's Hospital Perioperative team, a time study was done to compare the time required to submit a case via iQueue versus time to submit via the old call-in workflow.

## Time study results

To conduct the time study, LeanTaaS compared iQueue back-end data to phone data which was collected via the OR Scheduling team at Woman's Hospital. Both the iQueue and phone data include time to schedule, reschedule, cancel a case, or edit patient information. Two months of user data was collected to make the comparison.

Scheduling within iQueue was found to be 12% more efficient when compared to the old call-in workflow, averaging 3 minutes and 6 seconds to submit a case with all the required case details. In addition, iQueue users saw

efficiency gains month over month as they became more familiar with the process, with the most efficient user only requiring 2 minutes and 20 seconds to submit a case (on average).

### ADDITIONAL BENEFITS AND EFFICIENCIES:

The time study results demonstrate a "time to submit" benefit for users leveraging Case Scheduling. However, additional efficiencies gained via Exchange plus Case Scheduling provide significant benefit across all users.



#### Single source for all scheduling tasks

Create a single source of truth for all scheduling activities within one consolidated platform—no more monitoring email, fax, and phone channels.



#### Optimize room and time placement

iQueue's proprietary "Find Best Match" algorithm takes service line, robot constraints, and surgeon preference into account to recommend an optimal room and time.



#### 24/7 visibility and accessibility

Visibility into block and open time for clinics and surgeons allows cases to be submitted by clinics 24/7.



#### Easily reschedule canceled cases

Canceled cases can be easily rescheduled with just a few clicks, preventing cases from falling through the cracks.

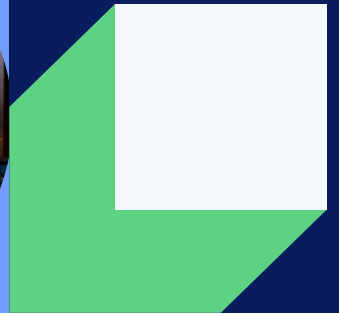


#### Reduce transcription errors and incomplete case details

Directly input case details from iQueue into the EHR for a reduction in transcription errors. Required fields also eliminate the submission of incomplete case details.

### BOTTOM-LINE

Case Scheduling is a more efficient way to book cases when compared to scheduling workflows at institutions not using iQueue. Surgeons and schedulers realize numerous efficiency gains beyond time to submit a case when leveraging Exchange plus Case Scheduling.



## Overview

Monument Health Rapid City Hospital is a community hospital in South Dakota, consisting of 12 operating rooms, 4 endoscopy suites, and is a licensed Level II trauma center. Rapid City Hospital is the largest medical center in the region, supporting over 360,000 people in western South Dakota.

Rapid City Hospital is the largest of five hospitals in the Monument Health system, all located in the Black Hills region. It has been dedicated to serving the community and providing high quality healthcare since 1878. The system is also part of the Mayo Clinic Care Network, which provides improved quality of care to patients at no additional cost.

## Problem

At Monument Health perioperative departments, gaining access to operating room open time was mainly completed over the phone or via fax. Only one or two clinics could reach the OR scheduling team at once, without any guarantee the time they needed would be available once they did connect with them. On top of this, given the constantly evolving schedule due to COVID-19, opening and closing first-come, first-serve rooms quickly became a priority. This was not easily executed through Monument Health’s electronic health record (EHR).

For leadership, pulling key metrics for surgeons and managers is often a manual and time-consuming process when working directly with an EHR. This becomes even more difficult when trying to create visualizations for day-to-day operational decisions. It was critical for the Monument Health team to easily see how many rooms they needed to staff throughout the day and ensure no resources were going unused.

## Solution

Monument Health implemented iQueue for Operating Rooms’ Exchange module to increase the efficiency of scheduling teams looking for OR time. Clinics can now immediately see times available in the OR that fit their provider’s case criteria. This eliminates the time-consuming phone calls and faxes when looking for first-come, first-serve time, while also providing alternative scheduling opportunities when needed. Additionally, iQueue allows OR schedulers to quickly manage open time as soon as staffing, equipment, or policy constraints arise, rather than making more complicated changes on the scheduling grid.

The Analyze module has further allowed the leadership team at Monument Health to quickly view metrics and create reports without needing to manually calculate or pull data from their EHR. To further support data transparency, personalized performance reports are sent to providers and managers to ensure they have convenient access to their data. The room usage visualizers have been an important data point used to support staffing decisions and increase efficiency. Using iQueue’s visualization solutions, the Monument Health team is able to determine when staffing is needed, and when resources can be conserved or repurposed.

### RESULTS:

**1,600**

FCFS minutes managed per OR per month through iQueue’s Capacity tool

### Visualizations

provide actionable data to make staffing more efficient

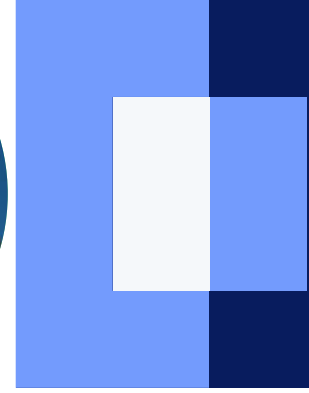
**880**

minutes of released OR time is requested again through Exchange every month

**17%** ▲

increase in released minutes with 442 reminders to providers about unused time





## Problem

Located in downtown Chicago, Rush University Medical Center is a nationally ranked hospital that performs over 44,000 surgeries a year. Rush is ranked as one of the top US hospitals, and has 11 top ranked clinic programs, including three of the best in the state of Illinois.

With its 38 physical operating rooms and its need to recruit new surgeons, Rush had a completely blocked schedule with short auto-release times. This caused a number of challenges to truly optimizing OR capacity and helping surgeons find sufficient open operating time to perform their cases.

“When I started this role [in 2020], I immediately had calls from surgeons wanting more time in the OR”, says Janet Stifter, VP Hospital Operations, Perioperative and Interventional Services and Professional Nursing Practice at Rush. “We were constantly trying to recruit new surgeons...when everything is blocked on the OR schedule it was a hard sell.”

Due to this scarcity, departments tended to hoard what time they did have and were reluctant to release it. Some low-utilization specialties were especially prone to holding on to time. In this environment, new surgeons were challenged with finding and reserving the operating time they needed.

Especially after the backlog of postponed or delayed cases accumulated after the initial COVID-19 surge in 2020, Rush needed a technology solution that would help unlock as much OR capacity as possible while improving utilization and developing surgeons’ trust that they could obtain the time they needed.

## Solution

Rush went live with iQueue for Operating Rooms during the pandemic. The implementation, which entailed minimal change management, immediately made data about block utilization visible to surgeons, department leaders and schedulers alike. This single source of truth led to productive, fact-centered discussions about how much time individual surgeons truly needed, as well as how to release or transfer time that was not being actively used across surgeons and service lines. Overall, this enabled more cases to be performed in the time and space available. “One of the most powerful things about iQueue was the data...surgeons really relate to data,” says Stifter. Surgeon trust in the scheduling system was noticeably strengthened by this data access.

The iQueue Exchange module was particularly crucial to addressing the problems Rush faced. The user-friendly, OpenTable-like platform let surgeons actively reserve and release time as well as track their own performance metrics. Newer surgeons felt empowered to claim the time they needed, while more senior surgeons felt freer to release excess time they were allocated but did not need. As Stifter describes, “the whole concept of surgeons using technology to drive their own scheduling is a lucrative portion of using iQueue.”

## Results

After about a year of use in iQueue, Rush saw a 3% increase in overall room utilization, showing surgeons and staff were able to perform more cases within preferred hours and avoid early mornings and late nights. The OR minutes for Rush’s top requesters of time also grew by 30%. Abandoned block time, meanwhile, decreased by 16%.

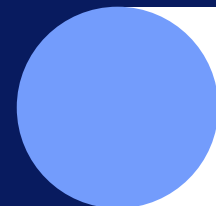
What supported these results was a dramatic increase in time to release, which previously ranged on average from under 24 hours to five days. Now “we’ve had as much as a three-week lead in releasing time, and far fewer emergency and urgent cases,” Stifter says.

Overall, with the support of iQueue for OR, Stifter has “as a new leader, been able to enhance surgeons’ experience and identify ways to get them more time in the OR.” The results show success.

**3%**  
Increase in overall  
room utilization

OR minutes  
grew by  
**30%**

Abandoned block time  
decreased by  
**16%**





## Overview

University Medical Center of El Paso is a not-for-profit community hospital in El Paso, Texas with 11 operating rooms and one trauma room. The hospital provides the only Level 1 trauma center and Level 1 stroke center in the El Paso region. UMC El Paso also serves as a teaching institution in partnership with Texas Tech University's Paul L. Foster School of Medicine. Consistently named one of America's Top 100 Hospitals, UMC El Paso has been providing the region with quality healthcare for more than a century.

## Problem

UMC El Paso's leadership requires regular reporting to make effective management decisions and optimize perioperative workflows. Manually creating these reports was time consuming, especially given individual metric requests from providers.

Additionally, surgeons felt there was not enough time in their assigned blocks and had little access to open time to supplement this. This resulted in surgeons requesting additional block time or having to add their cases to add-on time. Although there was already ample first-come-first-serve time, visibility into it was limited. Additionally, gaining access to this time early, which was often not possible, is a key factor in ensuring the time is used.

## Solution

UMC El Paso implemented iQueue's Analyze module to help with the reporting needs of the organization. This empowered their reporting team to quickly have access to many key metrics used to monitor OR efficiency as well as deep dive into key operational questions. Furthermore, Analyze allowed surgeons to have access to their individualized up-to-date metrics at any time and have reports sent to them on a weekly basis.

Exchange increased surgeons' and schedulers' visibility into the open time on the scheduling grid and made it easy to find and reserve open time for cases. Open time is now visible and being requested months in advance through the Exchange open time calendar. In addition to this, surgeons can now quickly see when robotic equipment is available, ensuring precious OR equipment is able to be utilized.

## Results

**19%**

Increase in case minutes per OR during first six months of iQueue usage compared to same time previous year

Over

**50%**

Of surgeons using iQueue are receiving Analyze metrics via SMS or Email

Over

**14,500**

Minutes of requested open time per OR during first year with iQueue

**On average**, open time requests are being made two weeks earlier than when iQueue was first implemented

# MultiCare OR: Improving Care from the Epicenter of the Pandemic



## Overview

MultiCare Health System is a not-for-profit health care system serving the Washington state community for well over a century. Consistently ranked as one of the nation's Most Wired healthcare organizations by "Hospitals & Health Networks" magazine, MultiCare maintains a constant and unwavering dedication to the health of the community. The organization consists of 11 hospitals, as well as a robust network of primary, virtual, urgent and specialty care services.

## Problem

In the years leading up to the COVID-19 pandemic, MultiCare's perioperative leadership were committed to:

- Increasing operating room (OR) access for new and existing surgeons,
- Continuing to attract new surgeons while accommodating for growth and significant backlog in existing ORs, and
- Improving data credibility and transparency across the organization.

Block management was manual and time-consuming and the data was retrospective. MultiCare was committed to improving efficiency and finding an effective way to increase visibility, accessibility, and accountability of

OR time. MultiCare partnered with LeanTaaS to optimize OR capacity.

MultiCare was making great strides in optimizing OR primetime utilization and accommodating growth, experiencing growth in primetime utilization of over 12% across 30 operating rooms. In early March 2020, MultiCare found itself at the epicenter of the United States' first wave of the COVID-19 pandemic. The organization re-focused its priorities on telemedicine and centralized coordination of patients. As MultiCare emerged from the first wave, it faced not only the unknown but also coordinating elective surgery cases that had been canceled by state authorities. The organization used iQueue for Operating Rooms and its partnership with LeanTaaS as a tool to manage OR capacity and accommodate elective surgeries.

## Solution

LeanTaaS' iQueue for Operating Rooms tool is a scalable, cost-effective solution that can be integrated with Epic EHR, providing cloud-based access on mobile and web browsers. iQueue's real-time OR utilization and performance data can increase capacity to existing OR, by:

- **Improving OR access:** iQueue for OR streamlines a surgeon office's ability to find open time, enabling surgeons to easily and proactively release unneeded block time far enough in advance to be efficiently filled by another surgeon. This not only helps existing surgeons eliminate case backlogs, but also provides ease of access to open time for new surgeons looking to bring cases.
- **Increasing surgeon engagement:** iQueue for OR simplifies data sharing across campuses, improving data transparency and credibility for all stakeholders. Surgeons now have better visibility into their utilization and performance metrics.
- **Providing a more efficient way of managing block time:** The solution provides a simplified, real-time, productive approach for monitoring block utilization and a far less contentious way of collecting and allocating block time.

iQueue for Operating Rooms also provides on-demand access to a comprehensive set of daily metrics to help leadership quickly identify trends and address opportunities for improvement.

## Results

In the two years since implementing iQueue for Operating Rooms, and prior to the first wave of COVID-19, MultiCare experienced:



35%

DECREASE  
In Unused Blocks



15.2%

INCREASE  
In Case Volume



12.4%

INCREASE  
In Prime-Time Utilization

We like partners like LeanTaaS with whom we developed a strong partnership because their team doesn't just implement the technology and walk away. They listen to our evolving needs and provide product enhancements for greater visibility into the challenges we are facing.

MultiCare has been able to help support our existing surgeons in managing their OR cases in a time when there was exciting capacity.

Dr. Michael Meyer, MD, MBA  
Cardiothoracic Surgeon Physician Executive  
& Chief Medical Officer, MultiCare Health

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## Overview

Dignity Health is a nonprofit network of more than 40 acute care hospitals, and 400-plus care centers, including community hospitals, urgent care, surgery and imaging centers, home health, and primary care clinics in Arizona, California, and Nevada. Collectively, the Dignity Health network includes more than 250 operating rooms.

By establishing and nurturing cross-functional partnerships across different teams, Dignity Health gained access to near real-time operating room performance data, trends, and predictions down to the surgeon level. This not only improved OR utilization, it streamlined the scheduling process for OR schedulers and surgeons, and enhanced the opportunity based on patients' preferences.

Dignity Health joined together with Catholic Health Initiatives in early 2019 to create a new nonprofit Catholic health system dedicated to serving the common good: CommonSpirit Health.

## Solution

To address the aforementioned problem, the Dignity Health Executive Leadership team searched for a solution that aligned with and promoted their enterprise core values of collaboration, inclusion, integrity, and excellence. They partnered with LeanTaaS to deploy iQueue for Operating Rooms' three modules system-wide. Dignity Health's parent company, CommonSpirit Health, facilitated the deployment process through a collaboration between Patient Care Services (Perioperative Services) and IT Digital and Software Engineering teams.

The tools were operationalized by key OR stakeholders who provided their OR expertise, and also by physician outreach/market representatives and business development liaisons who provided a market perspective. This created a closed-loop cycle that synergized in-house hospital personnel with market development and sales to comprehensively merge actual OR conditions-to-market positions.

The three aforementioned modules – **Analyze, Collect,** and **Exchange** – address three main pillars to improve OR performance and efficiencies: Visibility, Accountability, and Accessibility

### **Exchange:**

Exchange created OR access for surgeons needing time through an Open Table-like “marketplace for Open Time.”

## Problem

Dignity Health Perioperative Services found that utilizing traditional block management methods for surgical schedules resulted in a lack of foresight into what block time would ultimately go unused, limiting OR access. They relied on a time-consuming manual release process dependent on each physician office. Outdated “phone and fax” methods to change schedules were inefficient and unproductive. Additionally, there was low accountability for block time using block utilization as the metric. It was hard to hold block owners accountable using a one-dimensional metric. Influence, not data, often drove allocation.

With limited visibility and transparency of key metrics, valuable information was buried in hundreds of reports that were time consuming to produce and consume. Valuable OR time went unused, impacting surgeon satisfaction, patient access and hospital ROI. Dignity Health leadership realized they needed a predictive and prescriptive approach to analyzing and increasing OR utilization. It was time to adopt a new technology and realize a greater return on investment.

It encouraged proactive release of allocated block time and created transparency into open time. The result? Shorter wait times for patients, more tightly packed schedules, and more cases scheduled.

### **Collect:**

Utilizing Collect, a much more actionable and surgeon-centric methodology to analyze block usage, changed Block Policy to focus on large chunks of unused block time that were truly reusable by the OR – “Collectable Time” instead of “Block Utilization.” Collect analyzed historical usage of allocated block time and recognized patterns to determine the unused chunks of time – termed collectable time – that could be released or repurposed to fill with other cases, thereby increasing patient access. Focusing on “Collectable Time” resulted in more accountability for block time than through Block Utilization.

### **Analyze:**

Analyze created a single source of truth for understanding OR performance and decision making. Significantly improving provider engagement, it shed light on credible performance metrics through mobile and web “push.” It allowed Dignity Health to predict high and low volume days, underutilized blocks, trends and anomalies accessed through a web-based, user friendly dashboard.



# Results

Dignity Health tapped iQueue for OR to identify changes in business patterns, identify opportunities for growth by unlocking OR time, have more data-driven and actionable conversations with care practitioners. This helped further foster the system's core value of integrity by establishing one single source of truth for analytics and OR accessibility.

By deploying the iQueue product suite across its 250+ ORs, Dignity Health in turn received actionable, personalized insights that advanced the timely delivery of quality patient care. These insights enabled them to achieve impressive results including growth of surgical market share, improved daily efficiencies and asset utilization, and hardwiring best practice behaviors within EHR and operations management. By adopting a "virtuous cycle" mindset, Dignity Health minimized unused OR time whilst maximizing utilization simultaneously by unlocking new OR capacity - accessible for all surgeons to utilize - via proactive block release patterns. A "virtuous cycle" is a chain of events in which one desirable occurrence leads to another which further promotes the first occurrence and so on resulting in a continuous process of improvement. iQueue's Exchange module has provided surgeons and schedulers alike increased visibility into the OR schedule and the opportunity to release and request OR time, when needed, through a seamless, web-based process available through laptop/desktop computers and mobile devices. The exponential increase in total number of blocks released year over year - a 153% increase - illustrates the genesis of downstream benefits. Without the ability to easily release block time proactively, OR time would otherwise go unused without any opportunity to backfill that time with other cases, deflating OR utilization.

Dignity Health's OR teams opened up 2.6 million minutes of service system-wide by releasing block time via iQueue, with an average lead time of four (4) weeks ahead of the date of surgery. This increased access to patient care - especially in underserved communities - and reduced patient wait times: On average patients' surgery dates were identified more than three (3) weeks in advance of the date of surgery, and appointments were confirmed within 24 hours. This helped bridge the healthcare disparity gap in several of their communities of service by unlocking wider access to surgical care in a patient friendly and timely manner relative to previous methods that constrained access to care. This helped Dignity Health further champion its core value of inclusion. Comparing year-over-year results, Dignity Health more efficiently utilized staffed rooms and specialized ORs. This resulted in all Dignity Health divisions seeing significantly improved performance, and each realizing millions of dollars in increased revenue year over year.

Despite COVID-19's impact on operating rooms nationwide - disrupting the marketplace's demand for elective surgery and significantly deflating OR volume - Dignity Health was able to maintain block and prime time utilization metrics at 56% and 46%, respectively, year over year without a

decrease. This in itself is an accomplishment and testament to how Dignity Health has operationalized its core value of excellence as it illustrates their ability to maximize asset utilization through improved visibility into data analytics, OR performance monitoring, and scheduling optimization in an unprecedented crisis throughout the majority of calendar year 2020.

## Stats

The 36 hospital locations in aggregate have achieved an additional contribution margin upwards of 14.5x ROI over the span of 18 months. All figures based May 2019 - December 2020 compared to previous YoY.

### Additional Contribution Margin ROI: 14.5X

**153%**

**INCREASE**  
Blocks Released

**26**

**DAYS**  
Release Proactivity

**21%**

Release Fill Rate

**9%**

**INCREASE**  
Staffed Room  
Utilization

**0%**

**YOY CHANGE**  
Prime Time Utilization  
despite COVID-19\*

\*Covid-19 has significantly impacted the healthcare industry nationwide and perioperative services, specifically elective case scheduling and block management which has diminished hospitals' and health systems' asset utilization potential.



## Overview

Headquartered in North Carolina, Novant Health is a non-profit integrated healthcare network with 15 hospitals across multiple states that has 123 operating rooms and more than 680 clinics offering advanced medical treatments. Utilizing purposeful innovation is fundamental to Novant Health's strategy of delivering patients an exceptional healthcare experience.

## Problem

Prior to COVID-19, Novant Health was faced with meeting substantial growth targets to scale their organization.

Opportunities for growth included:

- Attracting community surgeons within a competitive market;
- Enabling Surgeons to find open OR time; and
- Streamlining the OR scheduling process to accommodate new surgeons within existing capacity

As the pandemic advanced Novant Health, along with most hospitals across the country, faced a shortage of available operating room time, elective surgery backlogs, and low block utilization. Recognizing the highly competitive market, their system leadership needed a unified approach for making key decisions such as block time allocations, block release times, and streamlining operational improvements. System leadership was also seeking a credible "single source of truth" across all facilities for greater visibility and transparency into key metrics system wide.

## Solution

In order to address needs for greater accessibility to operating room time as well as increased visibility and transparency into operating room utilization, Novant Health partnered with LeanTaaS and selected iQueue for Operating Rooms. The health system understood that deploying the software, despite the pandemic, was necessary and proceeded to remotely implement iQueue across its North Carolina facilities.

By deploying iQueue for Operating Rooms, Novant Health sought to increase surgeon engagement as well as the surgeon's accountability for use of their allocated time, add transparency related to data-driven decision-making, and build surgeons trust in the data. Novant Health's Surgical Services Leadership understood that the software and partnership would be a means to adopt a new, more surgeon centric framework for measuring OR utilization.

## Results

In the seven months after launch, Novant Health experienced a 2.6% increase in case volume within existing capacity (despite the reduction in elective case volume driven by the pandemic) and a 3.8% increase in the number of OR minutes used across the system. They have also realized a 1% increase in both prime time and staffed room utilization and a 9% increase in volume from splitter surgeons across the most competitive market. Furthermore, Novant Health has increased surgeon engagement in their utilization: 55% of surgeons spend on average over 4+ minutes diving into data. Surgeons are also releasing block time that they know they will not utilize in advance of the auto releases, allowing other surgeons to claim the open time for more efficient patient access to the OR.

During the seven-month partnership with LeanTaaS' iQueue for Operating Rooms software and team, Novant Health has realized a 6.15X ROI, along with a greater breadth of engagement from surgeons and their practice administrators.

**2.6%**

Increase in case volume

**3.8%**

Increase in OR usage in minutes

**1%**

Increase in Prime Time Utilization

**1%**

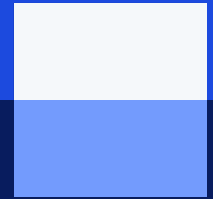
Increase in Staffed Room Utilization

**55%**

Surgeons engage in data, average 4:22 mins/session

**9%**

Increase in Splitter surgeon volume



## Overview

Baptist Health is a nonprofit, mission-driven healthcare system in the greater Jacksonville, Florida area. The system includes 5 Magnet-designated hospitals with 74 operating rooms and 14 endoscopy suites. Opened in 2005, Baptist Health Medical Center South includes 11 ORs and is consistently recognized both regionally and nationally for providing high-quality patient care.

When trying to increase access to Baptist South's ORs, surgical services leadership faced several challenges: The block schedule had limited open (first come, first served) time, making it challenging for surgeons without block time or needing additional time to access the OR. When there was time open and available in the OR, there was no easy way to advertise the time to surgeons and their schedulers. When trying to reallocate block time, surgical services leadership found it difficult to make defensible decisions using traditional methods of measuring block utilization.

Both surgeons and leadership had limited visibility into operational metrics. Acquiring reports often took a significant amount of manual work, and it was not easy for surgeons and leadership to see detailed data when desired.

## Solution

Baptist Health Jacksonville partnered with the LeanTaaS team to implement iQueue for Operating Rooms initially across Baptist South's 11 ORs.

The Exchange module encouraged block owners to release time that they did not plan to use. Baptist could then advertise the newly open time using the "OpenTable" feature to maximize utilization of available OR time.

The Collect module allowed surgical services leadership to assess block usage in a surgeon-centric, defensible manner. They were able to identify opportunities to repurpose "Collectable" block time without negatively impacting surgeons' practices. The Analyze module gave both leadership and surgeons deep visibility into one source of truth for key operational metrics. Surgical services leadership used this data to identify specific opportunities to improve OR efficiency and take targeted actions. Surgeons were able to access their data anytime on both mobile and desktop, allowing them to better understand their OR usage.

## Results

One year after launching iQueue in October 2019, Baptist Medical Center South realized the following improvements in access to OR time across 11 ORs when compared to the previous year.

**11%**

Percentage point increase in block utilization

**8%**

Percentage point increase in prime time utilization excluding the three month period impacted by COVID

**57%**

Percentage decrease in abandoned blocks

**25**

Days average lead time for released time, allowing time for additional cases to be scheduled into released time

Baptist leadership saw the measurable value realized using iQueue, and iQueue has since rolled out to 74 ORs and 14 endoscopy suites in the Baptist Health Jacksonville system.



## Overview

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%**

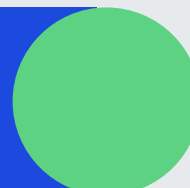
Increase in Staffed Room Utilization

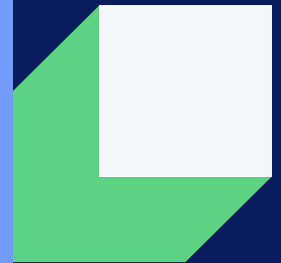
**5%**

Increase in Block Utilization

**51%**

reduction in abandoned blocks





## 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

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

## 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 lowperforming 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

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

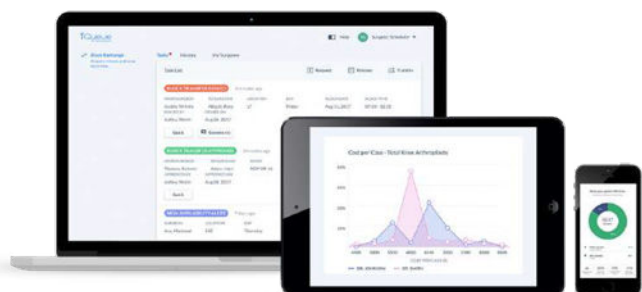
UCHealth's hospitals and clinics have been trusted health care destinations for generations of Coloradans. Today, based on four consecutive years of recognition of its superior nursing processes and quality patient care from the American Nurses Credentialing Center and its ranking as one of the top 15 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.



## Results

# 47%

Median increase in blocks released per month

# 10%

Earlier block releases

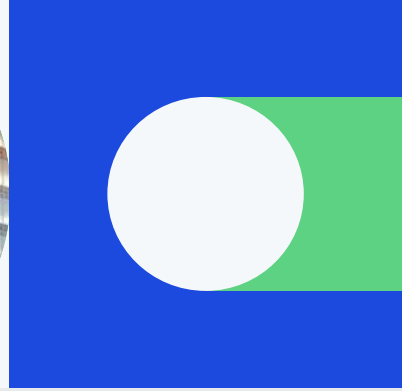
# 4%

Increase in OR utilization

# \$400k

Estimated additional revenue per OR per year





## Problem

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)

# 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



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 continuous communication between my scheduler and the iQueue team in real time.

**Roseann DiBrienza**  
Director of Perioperative  
Services



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



# What Your Colleagues Are Saying



The tools streamlined surgeons' and their offices' abilities to find open time and how open time was advertised, and made it very easy for surgeons to proactively release any block time that might not be needed far enough in advance to where it can be efficiently filled by another surgeon. This has not only helped our existing surgeons eliminate their case backlogs, but also has provided ease of access to open time for surgeons who were looking to bring new or more cases to MultiCare.



**Dr. Michael Myer, MD, MBA**

Cardiothoracic Surgeon and Physician Executive



LeanTaaS' technology predicts when blocks will be underutilized and enables surgeon offices to release them sooner than auto-release deadlines, so a large pool of shared open time can be created. Like OpenTable makes it easy to book restaurant tables, their tools would make it really simple to see open OR time anytime, anywhere, and ask for it. The data availability and transparency to everyone involved in meeting our goals [have] been critical in our collaboration efforts in policy writing and adoption.



**Dr. William Marx**

Medical Director of  
Perioperative Services



We are excited to utilize iQueue for our operating rooms because it gives us access to data that we previously did not have. iQueue enables us to have a better understanding of our true capacity and where we have opportunities to optimize our operating room utilization.



**Leslie Barrett**

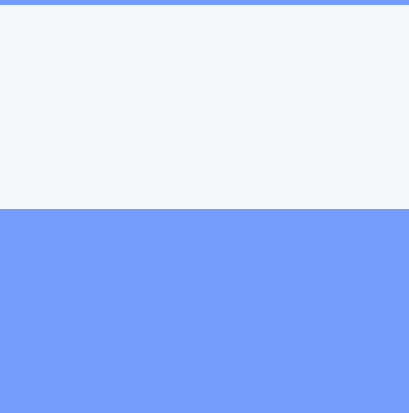
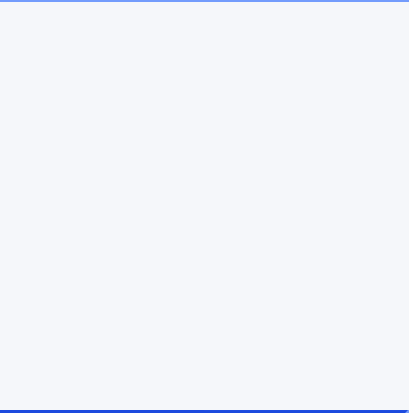
President and Chief  
Operating Officer



In the past, the clinic scheduler would need to call the surgery scheduler, which slows down the process for our patients. iQueue automatically factors in when an operating room will be free and it's an incredibly efficient way to grab up open time.

**Kim Combs**

Manager of Surgical Support



**CONTACT US**  
for a no obligation demo



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