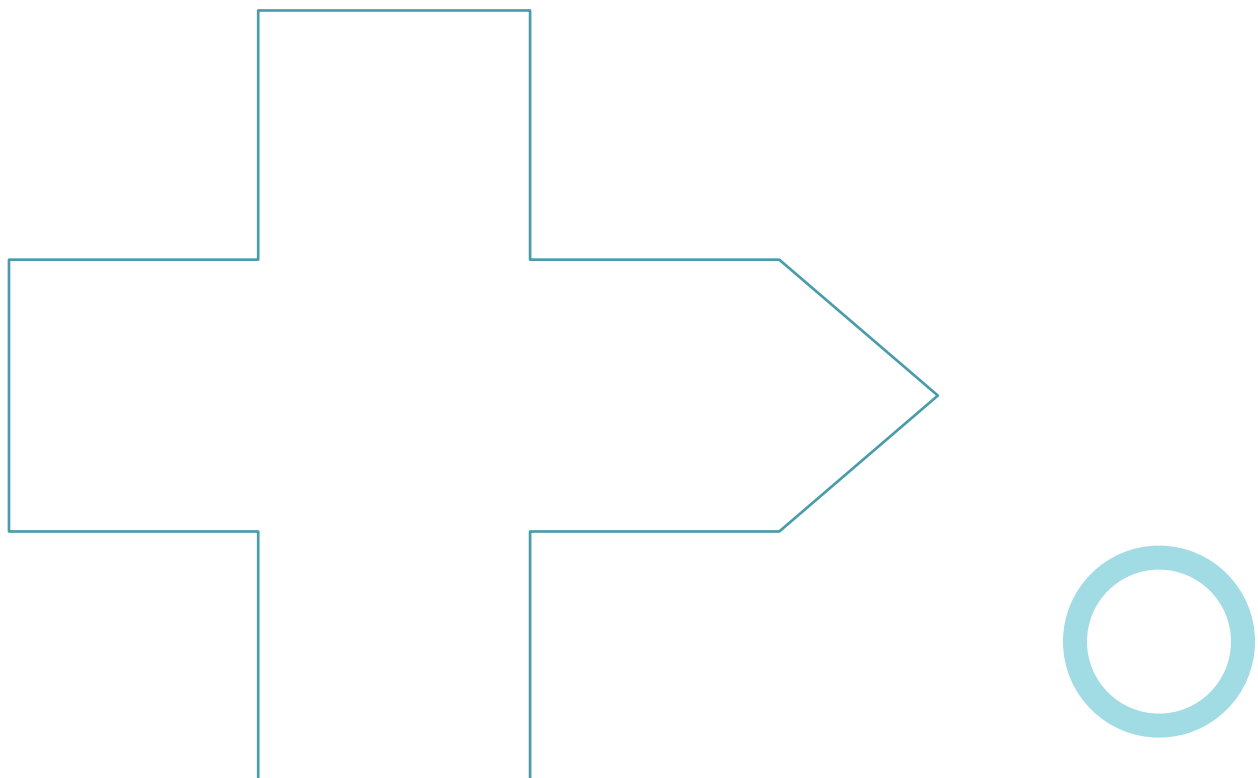


## CASE STUDY

How a leading healthcare network reduced length of stay and improved revenue with a command center using the FHIR-enabled Data Activation Platform

A leading not-for-profit New York-based healthcare network with a bed capacity of more than 250 and over 400 affiliated physicians, aimed to enhance efficiency and increase revenue using real-time insights on a surgical workflow dashboard. The allocation of surgeries to operating rooms (ORs) was a constant challenge. Due to high variation in the duration of surgical procedures, the network found it difficult to fix a schedule that balanced patient flow and surgery sequencing.

To overcome the unpredictability in wait times and increase visibility into scheduling inefficiencies, the organization leveraged Innovaccer's Hospital Command Center, powered by a FHIR-enabled Data Activation Platform to improve patient experience and streamline care. The solution ensured reduced length of stay and improved collaboration between teams for the healthcare network.



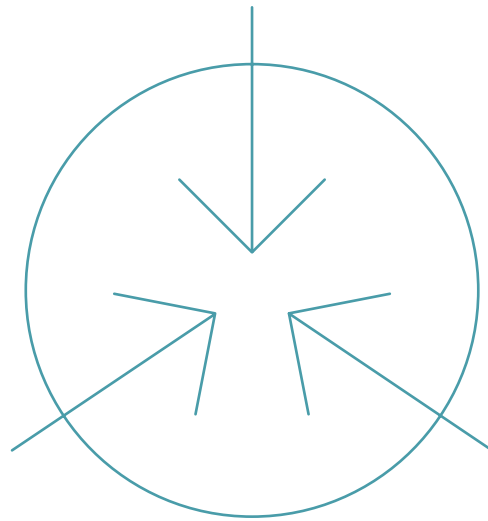
## Addressing the challenges

The network needed to address some key issues to alleviate the risk of surgical delays and cancellations:

- The absence of coordinated ownership of the patient flow process made the process of compiling and validating manual reports cumbersome and led to a non-credible set of KPIs for decision-making
- The lack of physician alignment made it difficult to find additional OR time for physicians
- The lack of a common standard for storing and sharing patient data resulted in data silos and operational inefficiency
- All block owners operated independently, and there was no accountability for avoidable patient days
- Duplicative processes across care areas resulted in affiliated surgeons losing potential patients to other practices

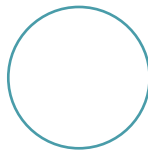
## Enabling end-to-end healthcare data integration for smooth care delivery

With Innovaccer's proprietary FHIR Healthcare Data Platform, the network was able to aggregate data from various sources, including EHRs, claims, pharmacies, hospitals, clinics, and labs. It leveraged rich analytics on patient data, prepared custom insights, and created useful dashboards for a comprehensive view of their population's health. The FHIR Healthcare Data Platform enabled real-time decision support, automated workflows for care teams, and point-of-care alerts for providers, which translated into a smooth and more efficient platform for care delivery in a complex environment.



## Utilization dashboards for real-time surveillance and impactful interventions

Innovaccer's Command Center helped providers track surgery cancellation rates, prime time utilization and resource allocation with real-time dashboards. It helped the care teams and administrators to understand inpatient management and improve patient flow with predictive insights. The network was able to leverage actionable, surgeon-centric utilization metrics to improve patient throughput and ensure seamless communication across care management settings. The solution also guided the network with financial, operational and clinical indicators to easily manage hectic days and improve the overall quality of care.



## Indicators to track clinical and financial outcomes

Each hour of unused operative time resulted in substantial revenue loss and enhancing the efficiency of the OR helped the network in directly realizing additional revenues.

Some of the key metrics that help healthcare organizations realize significant financial benefits are:

Average OR utilization

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Percentage of surgical cases delayed

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Average delay

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Average block time

Innovaccer's solution helped the network measure a wide range of metrics to track operational efficiency and accurately identify opportunities for improvement in coordination across multiple facilities within a health system. The solution also provided the network with user-level dashboards that contextualized the overall metrics for each user by way of surgeon scorecards. Some dashboard examples that Innovaccer's solution customized for the surgeons included:

The use of predictive analytics for surgery volumes and end times

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Number of surgeries performed in comparison with hospital average

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Number of surgical complications in comparison with hospital best or average data

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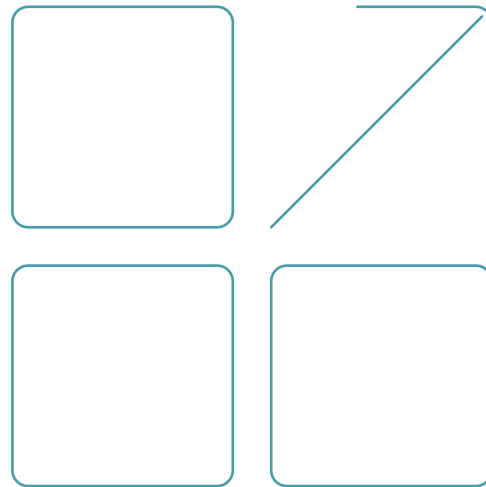
Average surgery duration in comparison with hospital best or average data

## Interactive dashboards to optimize block assignments

Innovaccer's solution leveraged machine learning algorithms to study the network's past data across various dimensions such as type of surgery, surgeon experience, complications and other factors to assign specialty to ORs and sub-specialties to time blocks. It also helped in determining block duration and surgery sequence, incorporating marginal delays. This led to reduced costs, accurate staffing and a seamless surgical flow for the healthcare network.

## Real-time dashboards to avoid delays

Delays frequently occurred in the ORs and impacted the patient flow and resource utilization for the organization. Innovaccer's solution leveraged the ML-model to identify OR delays resulting from various factors such as turnover between surgeries, nonoperative time and other factors to optimize surgery timings and OR utilization.



## Smart dashboards to avoid last minute cancellations

The majority of unexpected operating room cancellations in the network occurred due to equipment shortages, scheduling errors and inadequate preoperative evaluation. The most common factor leading to last-minute cancellation was lack of OR time management.

Innovaccer's solution helped overcome all avoidable cancellations with real-time resource allocation and accurate block optimization. The algorithms also enabled time slots for small yet significant steps such as OR preparation to avoid scheduling errors.

## Insightful dashboards to minimize the variance in care

Innovaccer's data-driven approach helped providers understand the variance in care delivery through quantifiable metrics that could be seen changing over time on comprehensive dashboards. It helped providers identify best practices with data-driven medical evidence and understand guidelines and care pathways to streamline quality care.



## Results

The health network adopted an advanced, data-driven approach to improve quality and financial success with efficient OR management. With Innovaccer's FHIR Healthcare Data Platform, the network was able to achieve the following outcomes:

The hospital recorded an  
**11%**  
reduction in Acute In-Patient LOS

**19%**  
improvement in Observed LOS  
resulting in over

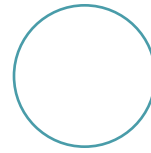
**\$3.5M**  
in savings over 3 years

The hospital was able to improve its patient flow using insights from the Command Center on outcomes.

The network recorded a  
**22%**  
reduction in wait times.

With deep data insights on its ROI and advanced analytics on clinical data and key metrics, the network recorded a  
**12%**  
reduction in ED visits.





Innovaccer Inc., the Health Cloud company, is dedicated to accelerating innovation in healthcare. The Innovaccer® Health Cloud unifies patient data across systems and care settings, and empowers healthcare organizations to develop scalable, modern applications that improve clinical, financial, and operational outcomes.

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Innovaccer's solutions have been deployed across more than 1,600 care settings in the U.S., enabling more than 96,000 providers to transform care delivery and work collaboratively with payers and life sciences companies. Innovaccer has helped its customers unify health records for more than 39 million people and generate over \$1B in cumulative cost savings.

Innovaccer is the #1 rated Data and Analytics Platform by KLAS, and the #1 rated population health technology platform by Black Book.

For more information, please visit [innovaccer.com](https://innovaccer.com)

