LeanTaaS

CASE STUDY BOOKLET

Optimizing Inpatient Operations

175
Health Systems

600
Hospitals

19,500
Inpatient Beds

uchealth

Leading Florida Health System

HealthFirst

Leading Indianapolis Health System

HENDRICK HEALTH

uchealth

Overview

UCHealth is an Integrated Healthcare Delivery System serving Colorado, southern Wyoming, and areas of Nebraska. The network, which runs on Epic system-wide, consists of 12 hospitals with a total of 1,987 inpatient hospital beds and performs over 136,000 admissions and observation visits per year.

Recognized as a Level 10 "most wired" health care organization by the College of Healthcare Information Management Executives (CHiME). UCHealth has also received multiple rankings among the best hospitals in the country by US News & World Report.

Problem

UCHealth was using home-grown tools that required manual preparation on a daily basis. The bed management system required nurses to enter when patients were "ready to move" after physicians wrote downgrade orders for transfer to lower levels of care.

While the organization had access to reports, dashboards, worklists, and an extensive amount of data, none of these provided real-time data or accurate predictions of what would happen in the future. The organization needed a solution that would eliminate guesswork and anecdotal information from the decision-making process. A datadriven approach involving predictive and prescriptive analytics would help them both plan for tomorrow and manage the immediate needs for today. UCHealth was also looking for a single source of truth for capacity management that could be shared in real-time across departments, clinical disciplines, and the health system as a whole.

Solution

UCHealth partnered with LeanTaaS to implement iQueue for Inpatient Flow. iQueue provides real-time data plus predictive and prescriptive analytics that enable

operational teams to move away from reactive capacity planning and toward proactive problem-solving. The solution also improves patient flow by reducing wait times at key steps along the patient journey and mitigates the chaos historically inherent in managing bed capacity. As a result, UCHealth staff is able to predict future admissions and discharges, balance beds across the network, hospital, and unit, and confidently make strategic decisions to get the right patient in the right bed at the right time.

Using iQueue, UCHeath staff can quickly see, at any time and from any location, capacity status, as well as which units are performing strongly with discharges and which are falling behind and need more focused support from staff to decrease delays. They can also identify the specific patients who could be discharged soon, and facilitate their discharges as needed.

RESULTS:

iQueue has been live at UCHealth's 569-bed main hospital since February 2020, and at 12 of UCHealth's Colorado hospitals since October 2020. Systemwide, the organization uses iQueue for Inpatient Flow to run daily bed meetings, perform hourly administrative management, and drive capacity protocol standardization. Patient flow metrics have noticeably improved.

37% ▼
Reduction in time to complete ICU Transfers

90% ▼
Reduction in time to complete ICU Transfers

4% ▼
Decrease in time to admit (despite 18% increase in COVID-19 census)

8% ▼
Decrease in Opportunity Days (Difference between Med/Surg LOS & CMS LOS)

Leading Florida Health System

Overview

This leading Florida health system is one of the largest employers in their county and has received an IBM Watson Health Top 100 Hospital recognition as well as a Top 100 Hospital with Magnet Designation.

With over 45,000 inpatient admissions, this system was looking for a digital transformation to streamline discharge management and care team coordination.

Problem

As patient volumes grew, the organization struggled to manage capacity and throughput due to inconsistent discharge management and siloed information across nursing units and care teams. Data challenges such as limited access to real-time patient status and discharge barriers, as well as critical patient information being inconsistently documented or even missing, made it difficult for the Patient Logistics Center and Case Management to prioritize patients for discharge in unison.

Additionally, unreliable and interruptive communication methods such as in-person conversations or text messages delayed sharing or acting on critical information. These factors ultimately led to discharges taking longer than required, which exacerbated boarding issues in intake areas.

Solution

Partnering with LeanTaaS, this organization implemented iQueue for Inpatient Flow, enabling them to immediately automate discharge prioritization and patient predictions across the system. They were able to prioritize and drive discharges across the units of greatest need by leveraging accurate bottleneck and barrier predictions. This empowered the clinical coordinator to identify potential discharges and coordinate actions while a discharge expeditor was able to work cross-functionally on the day's active discharges.

iQueue ensured a consistent and repeatable discharge process by addressing discharge barriers in advance, identifying easily discharged patients without active orders, and maintaining collaboration and communication from shift to shift.

RESULTS:

13 Hour ▼

Reduction in average LoS while experiencing highest census levels in facility history

10% ▼

Decrease in discharge processing time while experiencing 23% increase in average daily census

32% ▼

Decrease in total ED boarding hours while experiencing a 22% increase in ED visits

HealthFirst

Health First, one of Florida's leading non-profit health systems, Central Florida's only integrated delivery network, and the only Level II trauma center in their county, is a high-volume health system. Over 1,200 nurses across 4 campuses cover more than 900 beds with 50,000 annual discharges, while 56 operating rooms perform over 22,000 surgeries per year.

With the goal of converting manual processes to digital, they partnered with LeanTaaS to leverage intelligent workflow automation and change the way they operate. Multi-functional teams that traditionally operated independently now have streamlined collaboration to facilitate new levels of excellence and patient care across the health system.

Discharge Management

Using the automated workflows and digital communication capabilities of iQueue for Inpatient Flow, the clinical care teams at Health First were able to streamline the discharge process in multiple ways. Predicted discharge barriers such as missing labs or post-acute care needs helped automatically prioritize patients for discharge, while the elimination of manual processes combined with increased transparency improved collaboration across care teams.

Nurse Staffing

Health First improved collaboration across their health system and improved their staffing practices with iQueue for Inpatient Flow through enterprise transparency, streamlined communication, and proactive planning.

The transparency of real-time visibility to staffing needs, float history, and available resources across the system, combined with AI-driven insights into forecast patient demand, made it possible to ensure appropriate staffing across all units in advance. While real-time communication between unit leaders and the staffing office enabled efficient staffing updates to all nurses.

Capacity Management

Using iQueue for Inpatient Flow's real-time, AI-enabled situational awareness capabilities, Health First digitally empowered nurses, hospitalists, and various supporting services such as radiology and transport to proactively manage operational performance across the system.

Multiple stakeholders relied on the real-time data and transparency to improve planning within their daily huddles. Nursing leaders proactively planned hospital-level throughput across cross-functional teams while unit leadership supported the coordination and execution of daily activities. At the same time, hospitalist teams set priorities and support services ensured adequate support was available for patients and clinicians across the organization.

Outcome

By leveraging LeanTaaS's advanced analytics platform, Health First has fully embraced digital transformation and is realizing the benefits on an everyday basis. This has not only enabled them to achieve their performance goals and respond to crisis situations like COVID-19, but it has also provided them with the foundation they need to continue pushing the limits of performance excellence using the real-time data and predictive recommendations offered by LeanTaaS.

HealthFirst

DISCHARGE MANAGEMENT RESULTS:

517 ▼

Reduction in avoidable days monthly

6 Hour ▼

Reduction in length of stay per patient

200 Hour ▼

Reduction of manual data collection and phone calls weekly

NURSE STAFFING RESULTS:

44% ▼

Reduction in core floating across the health system to different levels of care

45 Minute ▼

Reduction in communicating the daily staffing plan

X

500 Calls

Eliminated monthly to deploy staff

ENTERPRISE RESULTS:

2600 Hours

Repurposed weekly due to streamlined communication

35% ▼

Reduction in ED hold times

200

Employees engaged per shift through enhanced collaboration

30% ▲

Improvement in ancillary turn times
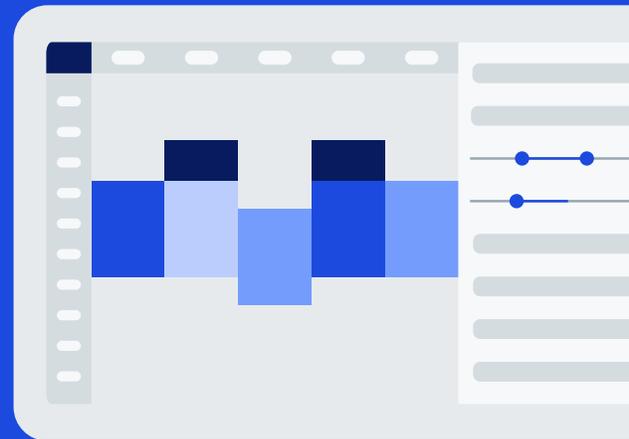
Leading Indianapolis Health System

Overview

With 4 hospitals consisting of 760 beds, and more than 4,000 staff members managing over 29,000 annual discharges, this leading Indianapolis health system was in search of intelligent workflow automation that could create transparency, increase staffed capacity, and improve patient care.

Problem

Staffing shortages and limited visibility to patient care needs resulted in inefficient operations, which impacted their ability to care for more patients. Resources were not properly utilized or shared across units, leading to staff being allocated to areas of less need. This impacted staff satisfaction and also resulted in leaders overprotecting resources and limiting collaboration to protect the resources they were given.

The organization attempted to address this imbalance by moving patients to where staff was allocated, which reduced patient satisfaction, disrupted the continuity of care, and reduced capacity due to delays and unexpected bottlenecks while moving patients.

In a further attempt to balance patients and staff across units, they relied on bonus pay to proactively fill open shifts, but not only was this process too time-consuming to fill last-minute openings, excessive bonuses were impacting the health system's bottom line.

Solution

iQueue for Inpatient Flow provided full transparency into system-wide patient care needs and resource availability, which enabled strategic staff reallocation based on patient needs, proactive capacity management, and data-driven decisions.

With the improved transparency of the availability of staffed beds along with better collaboration and resource sharing, nursing leaders enhanced their utilization of limited core staff, allocating the right resources to the areas of greatest need to drive the best possible outcomes. And while they didn't eliminate bonus pay, data-driven decisions on when to deploy such incentives improved equity across all services lines and proactively balanced the schedule across the health system.

RESULTS:

63% ▼
Reduction of patient moves within the same level of care

250
Days of usable capacity created per year through more strategic staff allocation

$1 Million
Savings per year as a result of fewer patient moves to put towards patient care

![Hendrick Health logo]

Overview

Hendrick Health System encompasses 850 beds across 3 hospitals, with 475 staff members managing nearly 37,000 annual discharges. To better handle this volume, they were in search of real-time insights that could create daily efficiencies, improve patient flow, and drive sustainable process improvements.

teams to escalate patient flow issues while providing leadership with a central location to review care plans and decision making.

Not only were these improvements impactful, they were sustainable. Automated metric monitoring made it easy to identify new opportunity areas and individual units were given the tools they needed to consistently track patient flow performance.

Problem

Limited visibility to discharge barriers and bottlenecks resulted in inefficient patient flow across the health system, and impacted their ability to care for more patients and create sustainable process improvements. Individual units managed daily discharges in a siloed and reactive manner, while unit-specific projects affected upstream and downstream patient flow, reducing capacity.

Manual communications delayed decision making and limited visibility into why or when decisions were made, delaying care progression. This problem persisted because leadership had no way to obtain quick updates on care progress, nor did they have the data necessary to identify key opportunity areas. The scattered data made it hard to sustain process improvements so strategic goals were not being met.

Solution

iQueue for Inpatient Flow provided visibility to daily discharge inefficiencies across the health system, helping their Throughput Committee create an action plan to improve patient flow. With this single source of truth and shared access to real-time data, Hendrick Health was able to standardize patient flow processes across units and create daily efficiencies. The communication platform built into iQueue enabled

RESULTS:

22% ▼
Reduction in order to discharge time

49% ▼
Reduction in ED boarding time

39% ▼
Reduction in left without being seen

DISCHARGE

What Your Colleagues Are Saying

uchealth

"It is such a powerful capability since it connects the dots between the data, the insight and sophisticated algorithms to provide actionable guidance to the front line."

Steve Hess
CIO

Leading Florida Health System

"Our average daily census is now in the mid 800s and we have not gone on diversion or refused transfers. Every surgery, every procedure, admission and direct admit is accommodated. We do not back up the OR, or the Cath lab. This is enabled by the tools we have from LeanTaaS because we can see where the potential roadblocks are in advance and act."

Industry Leader
At Major Health System

HealthFirst

"As the healthcare environment continues to rapidly evolve, we must pivot to better meet the needs and expectations of those we serve as well as our own caregivers and healthcare providers. Data transparency and proactive data-driven decision making needs to be at the forefront of everything we do. LeanTaaS provides the advanced digital solutions and services that are an integral part of the everyday experience of those we serve."

Patti Canitano
Divison Director Patient Throughput

**Leading Indianapolis Health System**

"The real-time transparency into daily staffing needs and resources that LeanTaaS provides has enabled us to become more nimble. We now send staff to where patients are and move patients less to ensure the best care experience for each patient."

Industry Leader
At Major Health System

HENDRICK HEALTH / HENDRICK MEDICAL

"LeanTaaS has provided us with the tools and strategies to create daily patient flow efficiencies, resulting in measurable and sustainable improvements. As a result, we have been able to streamline discharges and create capacity to care for more patients."

Jessica Connell, MSN,RN
ACNO Hendrick Brownwood
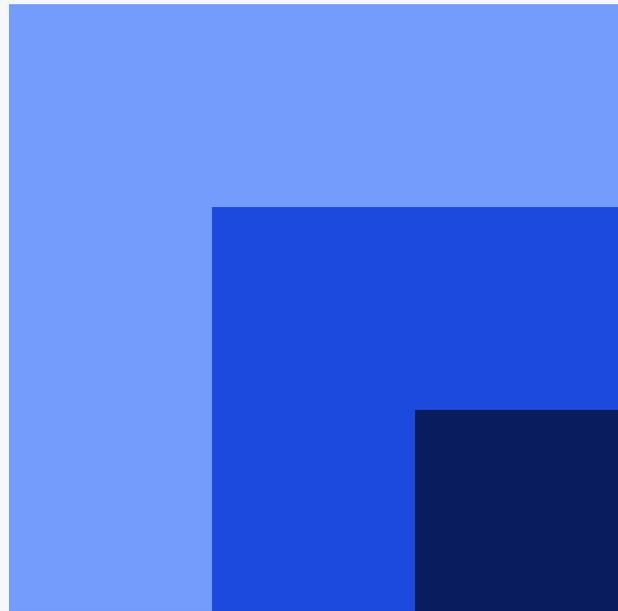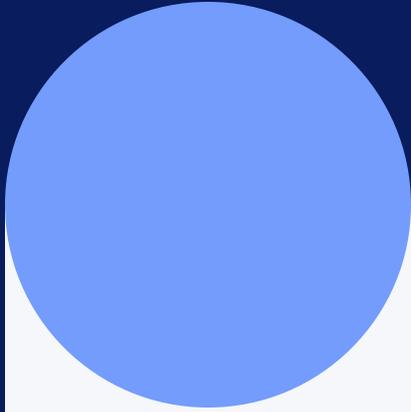
CONTACT US
for a no obligation demo

iQueue
FOR INPATIENT FLOW

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