



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 data-driven 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, UCHealth 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.

65% ▼
Decrease in time to complete ICU transfers

8% ▼
Decrease in opportunity days

16% ▼
Decrease in time to admit

10% ▼
Decrease in time to admit from the Emergency Department (despite 18%+ increase census)