

Transforming Pediatric Operations: How Children's Mercy Built a Command Center Model to Accelerate Flow and Expand Access

Case Study: Children's Mercy

Background

Children's Mercy is a stand-alone pediatric health system serving a growing population of high-acuity and medically complex patients across two campuses. Adele Hall (located in Kansas City, MO) serves as the primary campus, while Children's Mercy Kansas (CMK), located in Overland Park, Kansas, supports inpatient and emergency care. As pediatric demand increased, Children's Mercy faced rising operational pressure to provide timely access to care while maintaining safety, equity, and quality.

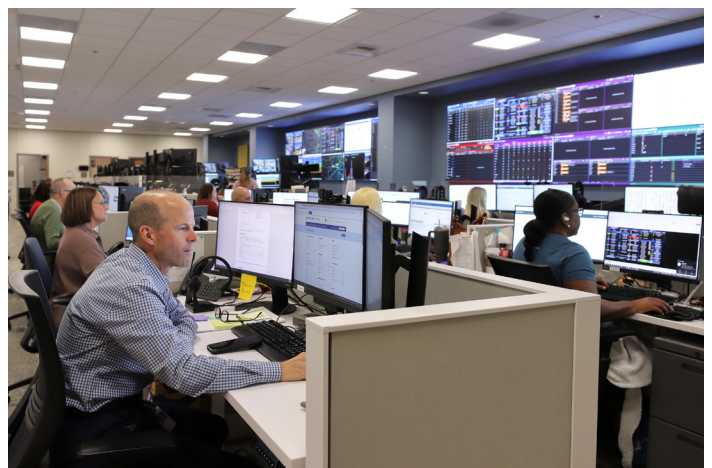
Prior to 2023, managing patient flow across the enterprise required significant manual coordination. Operational teams relied on siloed data, phone calls, and unit-level updates, making it difficult to anticipate capacity needs or respond proactively to emerging bottlenecks. Admission delays, discharge variability, and limited system-wide visibility constrained Children's Mercy's ability to consistently align demand with available resources, particularly during periods of peak census and seasonal viral surges.

Key challenges included:

- Fragmented visibility into bed status and discharge readiness across both campuses.
- High numbers of delayed and deferred admissions.
- Unpredictable discharge processes contributing to avoidable inpatient days.
- Difficulty balancing census between Adele Hall and CMK.
- Emergency department boarding during high-demand periods.

At the same time, Children's Mercy had limited ability to expand physical bed capacity or significantly grow staffing. Increasing patient complexity was driving longer lengths of stay and higher ICU utilization, while seasonal surges related to RSV, influenza, and other viral illnesses further amplified strain across inpatient and emergency services.

To address growing operational challenges, Children's Mercy focused on increasing *effective* capacity through redesign. In May 2023, the organization launched the Patient Progression Hub, a centralized operating model that brings together real-time data, predictive



Dr. Brian Olsen, Pediatric Intensivist - Critical Care Medicine, Children's Mercy

insights, and cross-functional teams. The Hub was designed to create a more proactive, reliable, and coordinated approach to patient flow, enabling Children's Mercy to improve access, accelerate throughput, and create more availability for children across the region.

Approach

Children's Mercy designed the Patient Progression Hub as an enterprise operating model for managing patient flow. Rather than functioning as a standalone command center, the Hub integrates people, processes, and Command Center technology into daily operations. That integration supports faster decisions, earlier intervention, and more consistent care progression across both campuses. This work was made possible through the dyad leadership of Stephanie Meyer, MS-FNP, RN, NEA-BC, Executive Vice President, Chief Nursing Executive, Chief Operating Officer Acute Care, and Jennifer Watts, MD, MPH, Vice President, Associate Chief Medical Officer, Acute Care and Inpatient Services, whose shared vision and operational expertise built the processes and operational model that underpin the Patient Progression Hub's success. Co-leading this initiative, they designed the foundational workflows and structures that, alongside the technology, made the model effective.

Centralizing Operational Decision-Making

Within the Patient Progression Hub, operational, clinical, and support teams responsible for admissions, transfers, discharges, staffing, and critical care transport work side by side. Core team members include Flow Administrators, a Hub Physician, Discharge, Emergency Department, and Environmental Services Expeditors, care management, nursing leadership, bed placement and staffing teams, transfer center and transport teams, and data analysts.

By centralizing these functions, Children's Mercy established consistent, enterprise-wide workflows for managing capacity. Admissions, discharges, staffing, and transport decisions are coordinated together rather than managed independently at the unit level, reducing handoffs and improving speed and reliability.

Using Command Center Technology to Drive Daily Operations

GE HealthCare Command Center provides the technology foundation for the Hub. Teams use a core set of Tiles—including Capacity Expediter, Census Forecast with Staffing, ED Expediter, and Patient Manager—to guide daily decision-making.

Supporting modules surface ICU transfer opportunities, device-related risks, and health equity considerations. Together, these views allow teams to quickly identify discharge-ready patients, emerging bottlenecks, and capacity constraints.

Standardized use of projected discharge dates and clinical readiness dates (PDD/CRD) improves predictability, supporting more reliable planning and smoother transitions throughout the day.

“The hub gives us visibility and transparency into the entire organization, from referral to discharge. Leveraging predictive analytics to accurately forecast patient volumes has allowed us to take proactive measures to streamline our operations and significantly enhance our patient care capabilities.”

— Jennifer Watts, MD, MPH, Vice President, Associate Chief Medical Officer, Acute Care and Inpatient Services at Children's Mercy

Redesigning Processes to Improve Flow and Reduce Delays

Insights from the Hub are translated into consistent, system-wide processes that reduce delays.

Key initiatives include standardized ICU transfer-out workflows, system-wide Lightning Rounds focused on discharge readiness, and aligned clinical and operational rounding with care management and charge nurses. Clear escalation pathways enable faster resolution of issues that threaten flow. Staffing decisions are increasingly aligned with forecasted demand, helping stabilize throughput during periods of high census.

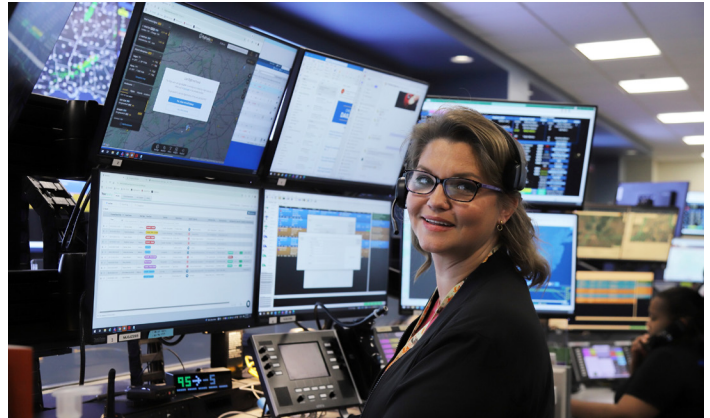
Planning Ahead with Digital Twin Modeling

Children's Mercy uses Digital Twin simulation modeling to anticipate demand and prepare resources in advance.

The Digital Twin trends census, bed mix, and staffing needs based on historical patterns and seasonal variation. These insights support staffing-to-demand alignment during peak viral seasons and inform longer-term planning for future inpatient capacity.

“Preparing for surges is essential to caring for kids and families across the region. This collaboration strengthens our ability to manage demand, support safe, timely care, and reduce avoidable delays through shared visibility and coordinated teamwork.”

— Stephanie Meyer, MS-FNP, RN, NEA-BC, Executive Vice President, Chief Nursing Executive, Chief Operating Officer Acute Care at Children's Mercy



Desirae Hopson, Communications Specialist, Children's Mercy



Sherry McCool, Senior Director of Patient Progression, Children's Mercy

Impact¹

Since launching the Patient Progression Hub, Children's Mercy has achieved significant gains in access, patient flow, and operational efficiency—despite rising clinical complexity. Shared real-time visibility, predictive forecasting, and new flow-focused roles have enabled Children's Mercy to reduce delays, unlock meaningful capacity, and deliver safer, more equitable care.

Improved Access to Care

- **59% increase** in inpatient volume at CMK, helping balance census across campuses.
- **15% rise** in average PICU volume at Adele Hall.
- **80% reduction in delayed admissions** and **90% reduction in deferred admissions** through the Transfer Center.
- **44% reduction in patients left without being seen** compared to 2022, driven by shorter ED wait times for physician assessment.
- **20% increase in mitigated referrals.** The Patient Progression Hub is more efficiently identifying appropriate patients and redirecting them to outpatient clinics, reducing unnecessary ED and inpatient utilization and preserving Adele Hall beds for high acuity care.

¹ All impact metrics provided by Children's Mercy Kansas City based on data collected from 2022-2025. Patient Progression Hub opened in May 2023.

Stronger Throughput and Increased Operational Capacity

- **30% increase in discharges before 11am** at Adele Hall due to system-wide improvement in discharge efficiency.
- On track for a **75% reduction in Avoidable Days** compared to 2022 at Adele Hall.
- **8% reduction in ED-to-inpatient placement times.**
- More predictable and accurate discharge planning across units and **greater than 95% compliance with inputting and updating projected discharge dates (PDD).**
- Faster ICU transfer-outs, enabling more timely admissions for critical patients.

Enhanced Patient Outcomes and Equity

- **32% reduction** in readmissions for patients requiring interpreter services.
- Faster identification of equity-related barriers via the Health Equity Tile.
- Improved oversight of risk-of-harm indicators and high-risk transitions.

Result

Children's Mercy has redefined pediatric operational excellence. Through the Patient Progression Hub, they have built a modern operating model that brings together real-time visibility, predictive intelligence, and coordinated clinical operations. The result is a more proactive, resilient system that can anticipate demand, act faster, and move patients more reliably—even as volumes and complexity rise.

In addition to the significant operational gains achieved without expanding staffed beds, the Hub has driven meaningful qualitative improvements, enhancing patient and family experiences across the entire Children's Mercy care continuum, since opening in 2023.

This work is more than an operational uplift. It is a scalable blueprint for how pediatric systems can expand access, elevate safety, and enhance readiness in an increasingly complex care environment.



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