

CASE STUDY

A public healthcare provider creates a central operational dashboard with CData Virtuality

Streamlined hospital operations

Consolidating data and implementing real-time analytics allows hospital staff to make faster, more informed decisions, leading to smoother day-to-day operations.

Improved patient experiences

Patients benefit from shorter wait times and more efficient bed allocation, resulting in a more positive experience during their hospital stay.

Improved staff well-being & retention

By reducing stress levels and overtime demands, the streamlined data system contributes to lower employee churn rates and higher staff satisfaction, fostering a healthier work environment.



Company

Public healthcare network

Industry

Healthcare

Product

CData Virtuality

Country

Canada

Snapshot

A public healthcare provider leveraged CData Virtuality to create a unified solution to aggregate data from disparate systems, providing rapid analysis and insights to allow staff to respond quickly and streamline operations

CData Virtuality helped a public healthcare network to centralize data, implement real-time analytics, and improve patient flow management, leading to more efficiency, reduced costs, and reduced employee overtime.

In healthcare, the speed of data delivery and availability can make the difference between life and death for patients, particularly in critical care settings. Physicians and other healthcare workers need to have access to accurate and timely data that follows the patient throughout their hospital stay. Traditional data collection methods can be fragmented across different departments, resulting in data silos that hinder accurate and timely decision-making.

A public healthcare network with multiple locations recognized these challenges and embarked on a mission to address them. They wanted to create a unified solution to aggregate data from disparate systems, providing rapid analysis and insights to allow staff to respond quickly and streamline operations.

The challenge: Managing massive data volumes

The healthcare provider collected and stored immense amounts of data, with each department handling its own. This led to siloed systems throughout the hospital network. Challenges persisted despite adding an enterprise data warehouse (EDW) to centralize the data. Delays in data updates, limited

real-time access, and complexities stemming from hospital mergers added to the problem. On top of that, the influx of new teams, like data scientists and engineers, strained existing data infrastructure, slowing down data access for frontline workers.

These obstacles added up to significant expenses for the healthcare provider. Regulations mandating minimum wait times and other service delivery metrics were tied to funding, making delays costly. Stringent staffing regulations and uncertainties in forecasting patient volume also led to missteps in scheduling, pushing costs higher. Staff became more stressed, creating high turnover rates, further exacerbating employee retention challenges, and compromising the quality of patient care.

The solution: Centralized systems for streamlined analysis

In response to these data architecture challenges, the organization's Director of Data Management and Governance and their team set out to find a solution to meet specific goals. They aimed to centralize all systems across the network into a single source of truth, implement an event-driven system, and ensure real-time data access for the operational team.

The key objective: Create an operations center dashboard that aggregates and analyzes data

“We built an operations center that functions like an airport tower. It gives you a 360-degree view of what’s happening on the hospital floor, what the patient’s needs are, and who is taking care of them.”

– Director of Data Management and Governance

from various systems to build accurate, actionable insights with speed. The team decided that the best approach was to build a data virtualization layer into the existing system for easy and real-time data access and self-service capabilities. After exploration and research, they discovered CData Virtuality, an enterprise data virtualization solution that addressed their complex needs.

The outcome: Self-service analysis for rapid insights

With CData Virtuality, the team swiftly built a dashboard for centralized data operations, making it fully functional within just three to four months. The dashboard integrated data from all the healthcare provider's many sources, providing a comprehensive view of the patient journey in near real-time. Patient information, including location, assigned bed, and wait time, is now accessible within three minutes of admission.

This new architecture greatly improved operational efficiency and enabled advanced analytical use cases. The Advanced Analytics team, comprising data analysts and scientists, gained direct access to the data, allowing them to focus on data modeling and experimentation without the need to prepare the data first.

The dashboard's overall operational and financial benefits were quickly realized: Improved wait times across all departments, reduced staff overtime costs, improved bed allocation, and decreased stress and turnover rates among healthcare staff.

The Data Management and Governance team looks ahead toward creating a fully modern e-health system based on AI, thanks to the solid data foundation they built with CData Virtuality. Connecting mobile devices to the data the staff needs to efficiently gather patient-related information from inside and outside the hospital will provide more advanced hospital operations. The system will improve operational efficiency at the most granular levels with accurate and timely predictions and insights from in-house machine learning tools.

Streamline healthcare workflows with CData Virtuality

CData Virtuality empowers healthcare organizations to streamline data management, enhance operational efficiency, and improve patient care. By centralizing data sources and enabling real-time analytics, CData Virtuality enables healthcare providers to make informed decisions and optimize resource allocation to deliver superior patient experiences.

Discover how CData Virtuality can revolutionize your healthcare workflows. [Try it today.](#)



CData Software is the real-time data connectivity company. Our connectivity solutions provide easy access to live data from hundreds of on-premises and cloud applications. Consumable by any user, accessible within any application, and built for all enterprises, CData is redefining data-driven business.