WIPFLi LLP
CPAs and Consultants

THE PROVIDER KIDS COUNT ON CAN NOW COUNT ON BETTER BUSINESS INTELLIGENCE

Children's
MINNESOTA

Children's Hospitals and Clinics of Minnesota is one of the largest pediatric health systems in the United States, with two hospitals, 12 primary and specialty care clinics, and 6 rehabilitation sites. It is the only health system in Minnesota to provide care exclusively to children from before birth through young adulthood.

An independent and not-for-profit system since 1924, the organization is regularly ranked by *U.S. News & World Report* as a top children's hospital.

With innovation as a cornerstone of its vision statement, Children's Minnesota embarked on a mission to become more data driven, both strategically and in its daily financial and operational decision making.

A Need to Quickly Turn Data Into Decision-Making Information

In any organization, information is king, and Children's Minnesota has always excelled at collecting valuable data.

"We've had a data warehouse for nearly 20 years along with data warehouse analysts who know that data extremely well," said Laura Madsen, the hospital's manager of enterprise analytics.

Although it had the data, its volumes were too unwieldy for reporting. The organization's IT staff found itself fielding an overwhelming and ever-increasing number of requests for operational and financial reports. Because information was difficult to access and took a long time to obtain, meeting and managing those requests was a time-consuming obligation. The department struggled to extract information with timeliness.

As a result, end users waited days and often weeks for reports, many of which were out of date and irrelevant by the time they became available. The bottom line: Pulling actionable insights out of its vast volume of health care data became a daunting task.

Children's Minnesota had previously waded into using Qlik's in-memory business discovery software, QlikView, with a few licenses and applications.

"While we had recognized the value in QlikView as a superior self-service tool, we were having a hard time freeing up staff to fulfill and leverage it," said Steve Martini, the hospital's manager of software engineering.

The hospital determined it needed to find a firm that understood the technology and could augment its staff with resources and expertise.

"We were looking for someone to perform QlikView development, and Wipfli was it," said Roberta Testor, Children's Minnesota's director of technical systems.

Wipfli partnered with Children's Minnesota to accelerate the refinement and documentation of the enterprise self-service business intelligence (BI) vision and identify best-practice gaps.

Strategy

Children's leadership had established a data driven vision and needed Wipfli's assistance in refining the vision and documenting the existing gaps. The Wipfli team interviewed key stakeholders and teams throughout the hospital and used the insights combined with best practices to document Children's Minnesota's BI model. To support this vision, Wipfli made strategic recommendations on what tools, training, and governance were needed and what types of analysis would complement what the leadership team had already put in place to serve the hospital's business needs.

"Wipfli's resources were extremely valuable because they didn't just try to make the QlikView system fit what we thought we wanted," explained Brent Lindstrom, operations strategist. "They really challenged us by saying, 'Is that what you want or not?' In other words, there was a lot of good discussion about here's what you think you want, here's what QlikView can do, and here's how we can make this all work better. They helped us understand at what level we'd really need to build this to make it an optimum solution."

With its vision and strategic direction better defined, the hospital's IT leadership was then able to secure the funding—nearly $1 million—necessary to make its vision a reality.

Madsen crystallized the group's needs and set the strategic priorities along with the roadmap for implementation. Her team then relied on Wipfli to design, develop, train, and deploy QlikView solutions. In all, Wipfli built about a dozen applications. Three of the most noteworthy were a surge application, a surgery application, and a strategy application.

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Surge App: Is It Flu Season Yet?

Every year, every hospital experiences a surge in activity that comes with flu season. Managing unexpected capacity can be tricky. Wipfli created a surge metrics application to identify and help anticipate the onset of the seasonal flu "surge."

The operational app monitors patient flow in emergency rooms to track and detect trends. The data in the app is only 24 hours old—nearly real time. It also incorporates flu trends from Google, capturing increases

in search activities regarding flu symptoms. The app has proven to be a leading indicator of when the season starts, and it has been consistent with what the hospital has seen.

Using the app, a team of 20 staffers share the goal of working through the season by focusing on the metrics associated with the surge. It shows emergency department metrics including how full the department is and how long waiting times are. Plus, it

offers census information like how full the inpatient floors are and what that means for getting flu patients into beds quickly.

Children's Minnesota staff can now all view the information at the same time to see what's happening and why and to better manage and monitor progress. With that single view, the hospital can ensure capacity, reduce constraints, meet expected demands, and provide appropriate care.

EMERGENCY ROOM
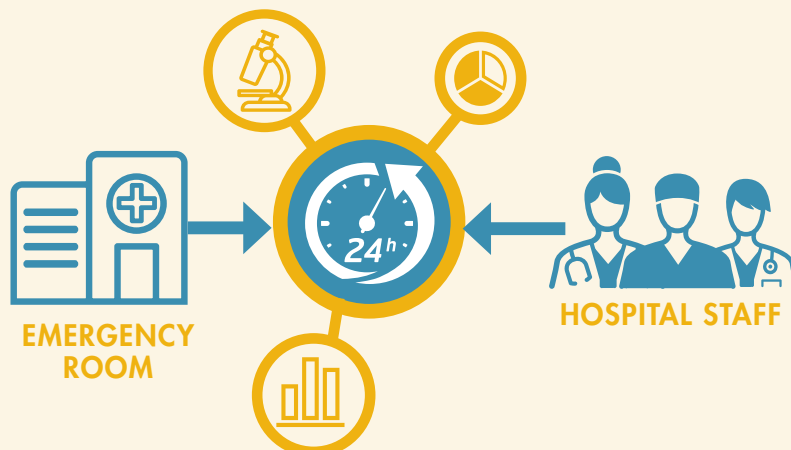
HOSPITAL STAFF

From Surge App to Surgery App

Efficiencies and cost-effectiveness are realities for every hospital surgery center.

"At the end of the day, we're a business, and the associated costs of services provided as well as the associated value or revenue from those services need to be tracked," explained Madsen. "We have a number of really important metrics that, from a surgery or procedure perspective, have to be tracked. We need to know how many surgeries are performed and where, the value associated with them, and the costs associated with them."

Previously Children's Minnesota relied on standardized reports that were gathered and reviewed monthly, with each of the hospital's three surgery centers reported separately. Reports were pages thick.

Wipfli developed an application to analyze and track data across Children's Minnesota's surgery centers.

The app consolidates the information from the hospital's three surgery centers into one database. Yet it also lets stakeholders view key metrics about operations and financials, either as a whole or as separate units. Decision makers can consider the costs at each individual surgery center or look at information on the whole. They can quickly see the benefits of what's working as well as what needs addressing or changing. The information is refreshed nightly, so the data is always fresh.

The app ties financial and operational data together and lets the hospital address charges, volumes, utilization, and statistics like on-time surgery starts. In addition, the hospital can view the data broken down in any number of ways—by surgeon, diagnosis, service line, inpatient/outpatient, anesthesiologist, time, location, etc.

SURGERY CENTERS

KEY METRICS

Smart Strategy Gets Even Smarter With Strategy App

Making expansion decisions and decisions on where and how to best meet the community's health needs depends on data, lots of good and accurate data. Together, Wipfli and Children's Minnesota developed a strategic dashboard that helps validate and support the provider's business development decisions.

Like most states, Minnesota publishes data on occurrences, trends, etc. The app takes that data, along with other public data, demographic information, and the hospital's own data, and compares it against the market and the hospital's market share.

Brian Frost is an operations strategist for Children's Minnesota and works on various service lines. He says the app lets him give "quick, simple answers to those within service lines." Yet it also provides discovery capabilities.

"For instance, if we notice a drop in neonatology and want to discover why, I simply start with the volume tab to first quickly see whether volumes declined," explained Frost. "Then let's look at the market share tab. Let's see whether Medicaid dropped or transfers stopped. The QlikView app allows for a very quick drilldown to find information quickly."

In addition, when analyzing specific programs like the neonatal surgical program, for example, for profitability or growth, the app offers quick visual graphs by service line.

"It's another tool for keeping our eyes across the continuum of care and services," said Frost.

> **"The most important benefit is data transparency. It's critical. We are giving people information and data around these things as quickly as we can, with no judgment about that information."**
> - Roberta Testor, Director of Technical Systems - Children's Minnesota

Empowering People

To date, more than 30 QlikView apps are in use at Children's Minnesota. They are helping to create efficiencies and save money by eliminating the need to gather and distribute information. Now everyone has the same information at his or her fingertips.

"These apps let employees use information in their day-to-day work without having to ask for queries," said Testor. "And since people have direct access to the data and can get the info themselves, we've taken tremendous pressures off the data warehouse group."

But the benefits have reached beyond just having better decision-making support.

The quality of those decisions has also been improved, Testor said.

"When people are closer to their information and nearer to the data, they understand what it is. The immediacy of it results in people being better informed. All of that supports a higher quality of decision making. They can make smarter decisions around what equipment to buy and what labor changes to make."

But the real win, according to Madsen, is the ability to put data in the hands of people who've never seen it before, to get them thinking and talking, which leads to new insights.

"The most important benefit is data transparency. It's critical. We are giving people information and data around these things as quickly as we can, with no judgment about that information. This is the biggest issue health care is trying to solve: 'How can we get information into the end user's hands as fast as possible?' And that's what we've done. Using QlikView and Wipfli has meant that we're providing content faster and providing it in a way that's contextual to ensure it's visibly received. Users simply make better data-backed decisions that way."

Learn more about how BI can help your organization:

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