

Information Builders helps organizations transform data into business value. Our business intelligence, integration, and data integrity solutions enable smarter decisionmaking, strengthen customer relationships, and drive growth.

## Queensway Carleton Hospital

### Snapshot

#### Organization

Queensway Carleton Hospital (QCH) is an urban community hospital that employs 1,900 healthcare professionals and more than 500 volunteers.

#### Challenge

QCH was struggling to comply with Canada's performance-based funding model. The staff needed self-service analytic dashboards that could correlate information from diverse sources.

#### Strategy

Use iWay DataMigrator to configure a data warehouse and WebFOCUS to access the data via a user-friendly portal.

#### Results

Dramatically reduced time that decision support team spent creating timely, accurate information. New analytic environment streamlined the process of complying with government funding initiatives

#### Information Builders Solution

iWay DataMigrator, WebFOCUS, App Studio, InfoAssist, BI Portal, RStat, and Professional Services.



## Queensway Carleton Hospital Meets Performance-Based Funding Objectives

### Self-Service Analytic Environment is One-Stop Shop for Information From Diverse Sources

Queensway Carleton Hospital (QCH) is an urban community hospital that is committed to providing high-quality patient care through each of its cornerstone programs. Employing about 1,900 healthcare professionals and more than 500 volunteers, QCH serves about 400,000 Ontario residents.

Like many hospitals in Canada, QCH is under increased financial pressure due to Canada's performance-based funding system. This payment model rewards physicians, hospitals, and medical groups for meeting quality and efficiency measures, while penalizing poor outcomes, medical errors, and runaway costs. Complying with these funding requirements involves analyzing hospital processes, reviewing patient outcomes, identifying areas for improvement, and predicting patient trends. The hospital needs to be able to easily access, combine, and analyze a broad array of data to determine how much funding it will receive

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To meet these and other information management requirements, QCH used to have four full-time employees focused solely on creating and managing reports. Yet even with that sustained effort, it was difficult to obtain accurate clinical data that revealed what was happening in the emergency room and other cornerstone programs, such as childbirth, geriatrics, mental health, rehabilitation, and medical and surgical services.

“Our old way of doing business, such as e-mailing spreadsheets and sending ad hoc requests by our decision support personnel, was not an efficient or effective way to provide data in real time,” explains Michael Cohen, vice president of Clinical Services and Information Management, as well as QCH’s chief information officer. “We needed to improve the way we delivered insight and supported the information needs of the hospital.”

Mr. Cohen knew that QCH needed more sophisticated data-management and analytic practices. The institution didn’t have extract, transform, and load (ETL) tools. In addition, its financial reports were very time-consuming to produce. He hired Laure Pitfield, an expert in data analysis and interpretation, to guide QCH’s Decision Support department on this project. Her challenge was to correlate information from multiple systems, create self-service analytic dashboards, and build self-sufficiency within the user community, thereby reducing the number of reports that IT had to manage.

Pitfield’s interdisciplinary team, which oversees the hospital’s data analysis activities, is implementing a new analytic environment using Information Builders’ business intelligence and analytics platform and data integration technologies. “Information Builders stood out during a competitive RFP process because of the scalability and flexibility of its software,” Pitfield says. “It was clear it would enable us to get information into the hands of our users more quickly than the other solutions.”

### **A High-Performance Data Model**

Previously, QCH was struggling to access data from a number of siloed data stores. Its data warehouse contained data from a Meditech health information management system, which captures data on patients as they become registered, and a Winrecs Med2020 abstracting system, which collects patient details, such as diagnoses, surgical interventions, length of stay, etc. Cohen’s group wanted to avoid the cost and trouble of developing a middleware layer to transfer other data into this Microsoft SQL Server data warehouse, for domains such as scheduling, payroll, and finance. In his view, a major advantage of Information Builders’ product line was its robust backend connectivity and built-in ETL tools. He decided to use DataMigrator to streamline connectivity to the new analytic system.

Information Builders Professional Services helped QCH design a new data model for the Meditech and Med2020 information. “DataMigrator helped us combine two sources of information to calculate a rate over time,” Pitfield explains. “It lets you point and click to create new tables without any expertise in database administration.”

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Pitfield and other members of the in-house team can easily add additional data sources, change the formatting, or modify the original data sources on their own. The team is also using WebFOCUS to build a new front-end environment for self-service analytics that contain several InfoApps™. According to Pitfield, the new Portal will soon be a “one-stop shop” for centralizing information from many different areas.

InfoApps are intuitive, visually compelling, and interactive interfaces, providing business users with instant insight into targeted clinical and administrative domains. For example, one of the InfoApps presents ten childbirth performance metrics. Designed as a scorecard, it lets people drill into the data to view results by the healthcare provider. “Reducing the C-section rate is a corporate priority,” says Cohen. “It was important to give the childbirth department the knowledge and understanding of what the C-section rate is and the other indicators that are linked to it, such as the induction rate and complication rate.”

**A High-Performance Data Model**

WebFOCUS InfoAssist is quickly becoming vital for important improvement projects occurring around the hospital. Pitfield likes it because it can provide a snapshot of the information in the data warehouse and empower people to create their own Excel pivot tables, so they can see how critical metrics are trending over time.

Cohen’s goal is to use Information Builders’ self-service analytic capabilities to empower the business community to access and analyze data on their own. “We want to change the role of the decision support staff so they can spend 80 percent of their time on value-added improvement projects,” he notes. “In the past they used to spend 100 percent of their time generating reports.”

The hospital also plans to use WebFOCUS RStat to predict how patient trends are likely to influence future activity levels. Ontario’s government funding model relies on formulas that are derived from a mix of historical payments and performance incentives. One formula defines a hospital’s volume of activity based on its services rendered. Instead of receiving money up front, the hospital must earn that funding as it treats certain conditions or performs various services, such as hip replacements.

**InfoApps™**

**InfoApps are intuitive, visually compelling, and interactive, providing business users with instant insight. Employees, partners, customers, and other non-technical users can leverage InfoApps to immediately answer numerous mission-critical business questions**

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With RStat, QCH will be able to predict the types of patient cases that are likely to be on the horizon. Cohen cites an example. "The trends might reveal that we will be 300 cases short of our hip-replacement target, which could mean a million dollar shortfall. The sooner we know that's happening, the better we can plan and respond, such as by opening up operating room time or scaling back on expenses."

The initial user base for the new analytic environment includes 75 members of the hospital's leadership team including leaders, managers, directors, vice presidents, and senior officers. Having a guided self-service analytic environment, accessible through the portal, will enable these decision-makers to constantly evaluate their plans and make adjustments throughout the year. "Our portal will soon be a one-stop shop for centralizing information that used to come from many different areas," Pitfield says.

Upcoming projects include a patient census dashboard and a compliance dashboard for analyzing infection-control practices. For these and other analytic initiatives, the new information management environment is quickly becoming essential.

"WebFOCUS helps us minimize the time we spend generating reports," Cohen sums up. "We now have the flexibility and power to achieve many of the productivity gains we envisioned at the start of this project."