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Case study:
St. Joseph's Healthcare Hamilton

Driving efficiency at St. Joseph's Healthcare Hamilton with system integrations

As a leading academic health science and research centre, St. Joseph's Healthcare Hamilton (SJHH), based in Hamilton, Ontario, Canada delivers high-quality, evidence based compassionate care to patients in Hamilton, Niagara, Haldimand, Brant, and beyond. SJHH is a multi-site regional tertiary center renowned for its strength in respiratory care, kidney and urinary care, mental health and addictions, surgical services, cancer surgery, and women's and infants' care.

Quick facts

5k+ Employees

700+ Physicians

1k Volunteers

HIMSS Stage 7

900+ inpatient beds

2 Surgical Centers

50k Emergency visits per year

Regional Dialysis facility

Regional Mental Health facility

129 year history

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Background

St. Joseph's Healthcare Hamilton is a multicampus academic and research healthcare organization with a patient capacity of more than 900 beds. SJHH is committed to making a difference in people's lives and creating a lasting future through integrated health services and internationally recognized programs. SJHH began using **Quanum Enterprise Content Solutions** (ECS) from **Quest Diagnostics** for their document management needs in 2015. At that time, it was a paper-based charting organization. Documents were sent to an off-site, third-party scanning facility to be processed and integrated into the Quest Diagnostics document management system.

St. Joseph's Healthcare Hamilton by the numbers: Information maintained in Quanum ECS

1.2+ million	28.9+ million	16+ million
patients	documents	charts

Challenge

SJHH produced a massive amount of information on paper, yet the data was often only visible to the staff member creating the document. Clinicians were often not able to access information digitally until after a patient was discharged. The ability to access information virtually in the patient's electronic chart was not timely for users.

SJHH transitioned to **Epic®** as their Electronic Health Record (EHR) in 2017. Integration with Quanum Enterprise Content Solutions shifted the document management process from pure paper charts to a hybrid approach of electronic content and scanned paper documents available in Epic via a hyperlink. This document-viewing integration enabled clinical users to view information electronically directly within their Epic workflow. Not long after that integration, Quest Diagnostics created an interface to add radiology documents to the hyperlinked documents within the Epic patient record. However, other documents still had to be processed through the health records department rather than in near-real time through the Quanum Enterprise Content Solutions system. SJHH wanted to leverage an interface to capture and index metadata for a variety of documents, including the MRN of the patient, patient visit date, and other attributes.

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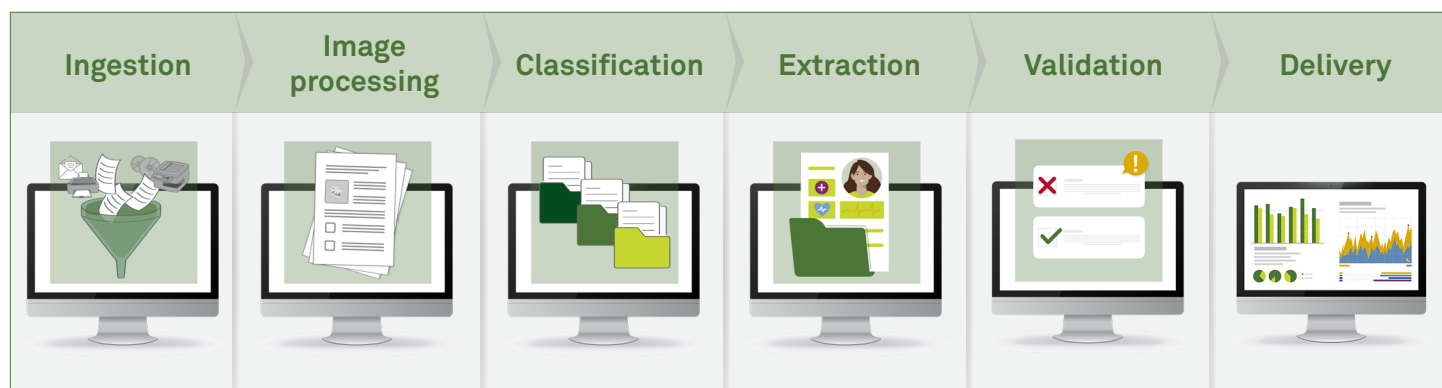## Enterprise Content Solutions

Solution

The Quest Diagnostics team worked with David Walther, SJHH's manager of business applications and integration of digital solutions and the SJHH team. The challenge: to use the existing interface for radiology documents to create a new Dynamic Document Interface following a set format and structure of intake criteria. Once implemented, SJHH could add a document type to the configuration as needed for the outbound interface that routes the document from Quanum Enterprise Content Solutions to Epic for seamless access via a hyperlink.

After a quick 2-month implementation, the SJHH team began using the Dynamic Document Interface for vitals monitoring, SeamlessMD surgical consents, an Ocean eReferral system, and other historical documents. Instead of scanning paper through the health records group, the information is now ingested directly into Quanum Enterprise Content Solutions. The Dynamic Document Interface also allows SJHH to work with systems that don't use HL7.

Additionally, SJHH deployed a scan acquisition tool that allows clinical units to conduct point of care scanning directly into Quanum Enterprise Content Solutions. Clinicians create documents that appear in the patient's chart for others to view and act.

To meet the **HIMSS Stage 7** certification requirement that all clinical information is accounted for and available in the EHR within 24 hours, SJHH extended Quanum Enterprise Content Solutions with **Intelligent Data Capture** (IDC) to automate content intake.

> "Thanks to a responsive working relationship with the Quest team, we are ingesting administrative and clinical information as quickly as possible. The data is high quality and legible, and the process is fast and accurate."
>
> —David Walther, Manager Business Applications and Integration of Digital Solutions

Ingestion	Image processing	Classification	Extraction	Validation	Delivery

Whether paper, an electronic fax, or other format, Intelligent Data Capture quickly and accurately captures the content and delivers it to the appropriate systems for immediate access.

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Results

Walther appreciates the key components of this multifaceted solution that have made it faster and easier to ingest valuable information. The linked documents and the scan acquisition tool create high levels of integration between Quanum Enterprise Content Solutions and Epic to benefit SJHH's workflow.

"The Dynamic Document Interface is a Swiss Army knife that allows us to slice and dice information," said Walther. "By utilizing and integrating the scanning and acquisition of documents, we're bringing together a full electronic picture."

> "This integration optimizes our document management system and ensures high performance by making incredibly valuable information, that would otherwise be on paper, available almost instantly electronically."
>
> —David Walther, Manager Business Applications and Integration of Digital Solutions

"In addition to saving staff time, the automation ensures the documents are integrated in near real-time so that information is available for use immediately, and they do not get lost in many interruptions of the day, which had become the office norm," said Walther. "There are so many documents and so much information in Quanum Enterprise Content Solutions that is then linked into Epic, and it's really a very critical part of our workflow because it eliminates the need for human intervention. This integration optimizes our document management system and ensures high performance by making incredibly valuable information, that would otherwise be on paper, available almost instantly electronically. Anyone looking to achieve HIMSS Stage 7 would want to use the solutions we've implemented because they focus on getting data, whether it's paper or electronic, into the system quickly so that clinicians can make use of it."

SJHH reports the following results for documents that have been automatically imported and time saved:

Ocean eReferrals	Ocean eReferral attachments	Vitals monitoring
1,347	**814**	**5,800+**
in 9 months	in 9 months	in 11 months

Nusing staff hours	Administrative staff hours
500+	**1,347**
in less than 1 year	in less than 1 year

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Looking ahead, SJHH will continue to look for opportunities for additional integration. Upcoming data conversion work includes capturing data from 2 outpatient mental health clinics that are moving to Epic. Another future initiative will begin once home monitoring of patient vitals is available, and will allow monitoring of patients with COPD, chronic kidney disease, in post-surgical care, and in physical therapy for hip and knee replacements. Like other applications, Walther envisions these PDF files will be captured into Quanum Enterprise Content Solutions and then hyperlinked within Epic.

"Epic and Quanum Enterprise Content Solutions are 2 core clinical systems that are tightly integrated to form our extended EHR environment," said Walther. "The integration is rock solid. It is highly effective and efficient, and we're reaping the benefits from it. Our goal is to make things easier for clinicians and improve the patient experience, and we are achieving that goal."

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Quanum Enterprise Content Solutions is an enterprise content management system designed to help hospitals, health systems, and large ambulatory groups drive operational efficiency. A patented, supervised machine learning capability automates the capture process and is capable of transforming structured and unstructured data into searchable and sharable content. Achieve enterprise-wide content management to promote better patient care, enhance operational efficiencies, and reduce the overall cost of healthcare. Deliver a single solution to efficiently manage all content, elevating access across the enterprise and automating processes. Enterprise Content Solutions provides users with the right access, in the right systems, at the right time.

Discover how Quanum Enterprise Content Solutions can manage your healthcare data to your exact requirements. To learn more, **contact us**.

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