



# **EMPOWERING INFORMATION:** THE PAPERLESS WORKFLOW OF DIGITAL ARCHIVING LEADS TO A TRUE SINGLE, DIGITAL HEALTH RECORD

Case study, Lennox & Addington County General Hospital  
Greater Napanee, Ontario, Canada

# “DEDALUS' ECM ACTUALLY EXCEEDED OUR EXPECTATIONS, IN HOW IT INTEGRATES WITH THE EHR, IN HOW IT HANDLES PDFS... IT'S VERY FLEXIBLE TO WORK THE WAY WE WANT.”

With Dedalus' Enterprise Content Management solution, Lennox & Addington County General Hospital enhances patient care by enabling the sharing of medical images and documents from any modality, while benefiting from productivity and cost benefits.

*“You wouldn't believe how much information there is out there with nowhere to 'live',”* starts Colin Catt, Manager of Information Services at Lennox & Addington County General Hospital in Greater Napanee, Ontario, Canada. But by implementing Dedalus' Enterprise Content Management (ECM) solution, Lennox & Addington now has somewhere to keep it all: a single, electronic repository, in which diagnoses, modality print-outs, microfilms and clinical and administrative records from anywhere in the hospital can be entered, stored and – importantly – accessed. *“The ECM makes our archiving truly paper-free and painless, which enhances our efficiency, cost control and patient care,”* he continues.



## “Dedalus' ECM Actually”

Lennox & Addington started on the road to becoming a paperless environment back in 2004, when it installed its Electronic Health Record (EHR) system. But a specific issue had stalled its progress: “The hospital had a lot of ‘orphaned’ modalities, i.e. modalities that weren't connected to the EHR. And every modality has its own output: ECGs, pulmonary or cardiac images. This information was not available in the EHR, so when someone needed a report or image from one of them, it still had to be printed out,” comments Catt.

*“That's not truly paper-free.”*

**COLIN CATT**



In 2014, the hospital implemented Dedalus' ECM. *"We carried out a project mapping of where we needed to go to achieve a truly paper-free workflow, and then we looked at several different solutions,"* Catt continues.

*"While there were a number of systems for scanning documents for electronic archiving, Dedalus' ECM stood out in a key respect: its ability to integrate all those orphaned modalities, to create a truly 'single' solution. With the ECM, when anyone needs a document, they no longer have to print a hardcopy; they can access it quickly from the EHR. For us, 'paper-free' means we don't need to pull out or create paper copies when we need a document. With Dedalus' ECM, that's what we finally have!"*

**COLIN CATT**

### **About Lennox & Addington County General Hospital**

The Lennox & Addington County General Hospital focuses on general medicine and general surgery, offering a comprehensive range of diagnostic services supported by a well-equipped laboratory and diagnostic imaging department. It is committed to providing high-quality healthcare close to home for the residents of Lennox and Addington and surrounding townships. The hospital currently operates 52 beds and employs approximately 270 staff. It has been officially recognized as a HIMMS level 6 hospital.



# “THE RECORD IS VERY WELL ORGANIZED AND EASILY SEARCHABLE IN MANY WAYS, MAKING INFORMATION RETRIEVAL AS SIMPLE AS IT CAN BE IN A WORLD OF HUGE DATA BASES.”

Dr. Kim Morrison, Chief of staff, Lennox & Addington County General Hospital

## Fast, easy access to all information

This ease and speed of access has important repercussions for patient care and for productivity. “Before, physicians and hospital staff had to travel to different departments of the hospital to retrieve paper documents from the various modalities. Now, they can quickly access all of the information available on the patient, regardless of which modality created it. Not only does this save time for the physicians and the patients, but the caregivers have more information available.” A time study carried out by the hospital for its ER revealed that, with the paper-based system, physicians had to wait an average of eight minutes when they requested a chart on weekdays – weekends and nights took even longer, and often required pulling a nurse off the floor to retrieve the file. With the ECM, it takes only seconds to call up all of the information.

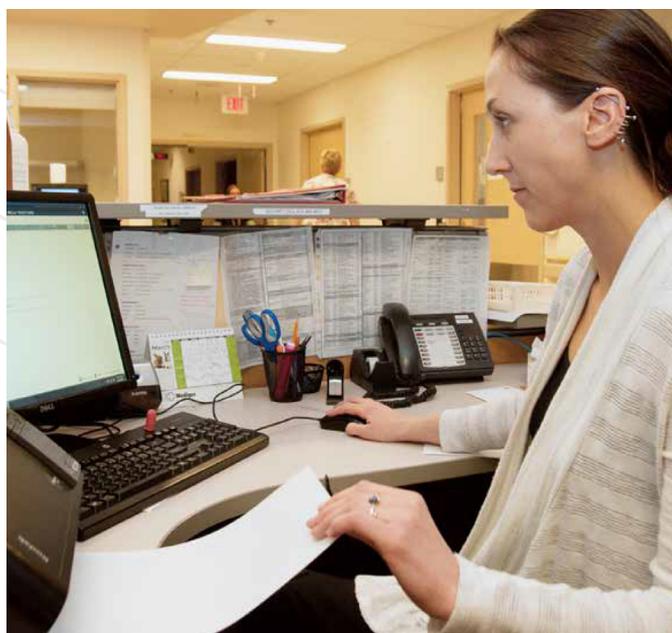
What’s more, all of the information is available from any machine, anywhere in the hospital, and even from home.

*“This means, for example, on-call doctors don’t have to come to the hospital to check the chart, as they did before,”* explains Colin. *“They have access to the full information where they are.”*

The result is that the clinician can focus more on the patient care, and making informed decisions with more complete information, with both clinician and patient waiting less time for that information to be available. *“The record is very well organized and easily searchable in many ways, making information retrieval as simple as it can be in a world of huge data bases,”* comments Dr. Kim Morrison, Chief of Staff, Lennox & Addington County General Hospital.

*“The work done to set this all up from the beginning was key to its success. What’s more, the ECM offers a back-up of our admission notes and discharge summaries – it is very reassuring to know that we have that in place.”*

**DR KIM MORRISON**



## Faster, more efficient workflow

On the administrative side, the impact is felt throughout the entire workflow.

*“For clerical staff, there may not be much difference time-wise between filing a paper copy or scanning it, but for the rest of the document handling – refiling, removing and replacing documents in binders, etc. – the ECM saves a lot of time. It also allows us to process documents in real-time – and enables improvements in auditing and enhanced Personal Health Information (PHI), which is an increasingly important issue.”*

Catt also specifies that the ECM’s scanning system is exceptionally fast, compared to other systems they looked into. *“We are scanning ‘as we go’,”* he explains. *“So when a patient comes to us, we check if they have any hardcopy documents and we scan those right away. Then, we can destroy the hardcopy, which saves us the space and time of physically archiving it.”* By reducing the amount of time staff spend looking for records and by moving most scanning from the Medical Records department to the point of care, the ECM has allowed the roles of the staff members to evolve, freeing their time to allow them to concentrate on quality assurance and quality control on the ECM. *“That’s time that was previously spent on tasks not related to patient care, that we can now dedicate to value-added tasks,”* highlights Colin.

## More time and resources for patient care

- **Constant record quality & disaster recovery :**

ECM can replace paper records and their associated risk of deterioration and destruction due to disaster.

- **Optimization of key resources :**

Resources formerly dedicated to paper archiving are now being utilized better; RNs are able to focus on patient care tasks instead of handling charts.

- **Time savings :**

ECM has eliminated the time lost in locating and transporting paper charts.

- **Access to patient information :**

The clinician has fast, “anywhere/anytime” access to patient information.

- **Enhanced patient care and reduced patient wait times :**

With the increased speed in accessing the patient’s information, the clinician can more quickly make informed diagnosis and/or treatment decisions.

## Enhanced collaboration along the Care Continuum

*"Dedalus' ECM actually exceeded our expectations, in how it integrates with the EHR, in how it handles PDFs... It's very flexible to work the way we want,"* says Catt. One department where this is felt strongly is the emergency department (ER), he comments, where having the best, current, 24-hour information on the patient is key to providing optimal care. However, communication between the GP [general practitioner] and the ER can be complicated to achieve. *"Now, we can take the GP's document, regardless of what platform it is in – HL7, ADT, DICOM, PDF, etc. – and bring it into the ECM. But the ER physician doesn't want to search for the most current file; he wants to see it automatically. So whenever there is a new document, the ECM replaces the old one: the ER physician sees only the most updated information. Yet it keeps a chronological audit history, so we can back check what has been input. This type of 'meaningful view' sounds simple, but technically it isn't; and it's a great example of how Dedalus approaches innovation, to find ways to meet real needs."*



Documents already archived in Dedalus' ECM.



Waiting time savings per chart.



Decrease in paper processing related time.



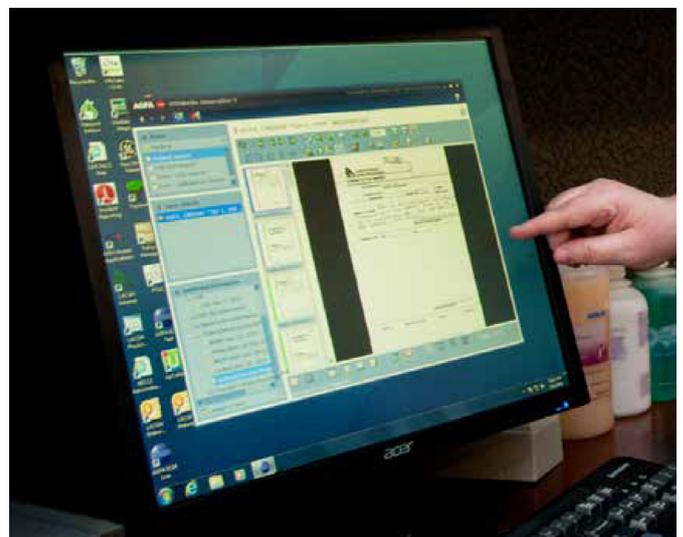
Per year clerical staff time saved.



Reduction in physical storage space.



Decrease in paper chart requests to medical records.



## A case in point

One user group that has experienced big advantages from Dedalus' ECM is the 'travelling' surgeons who work at Lennox & Addington as well as at other hospitals. "These doctors may not be familiar with using our EHR. But the ECM is so intuitive; the documents are presented right to the user, instead of the user having to search through the interface for everything. Before, the travelling surgeons wouldn't always have access to the information they needed. Now, with Dedalus' ECM they have everything at their fingertips: a full picture of the patient. They have definitely been won over by Dedalus' ECM!"

*"The ECM has been most helpful for keeping track and accessing information that we have received from other hospitals or consultants our patients have seen – especially patients who tend to travel back and forth. Information from other institutions is now easily found and accessed as needed,"* adds Dr. Morrison.

The ability to store and then access all types of images, coming from anywhere in the hospital, also supports physicians to follow up on the patient's evolution – key in a value-based healthcare environment. For example, surgeons can access photos taken in the Operating Room to compare them to what they see in the follow-up scope.

## A smooth implementation

The close team work and careful preparation by the Dedalus and Lennox & Addington teams resulted in a smooth and fast implementation, Catt continues. *"The Dedalus team is very knowledgeable; I've worked with them before at a different hospital, and both times I have been very impressed by their expertise as well as by their availability. Having good people on both sides shortened the preparation time for implementation, and the go-live only took one week. The system itself is so simple and clean to install, as well."*

## Supporting Integrated Care

Dedalus' ECM is an important building block for the hospital's integrated care efforts. *"Having all the information available in one place is absolutely critical for collaboration,"* explains Catt.

*"We are moving towards a model of 'team-based care', with patient information coming from lots of different players. The ECM gives us a place to put all that information, so the teams can work together efficiently for the patient.."*

**DR KIM MORRISON**

## A Gateway To Enterprise Imaging

Within the Canadian healthcare system, Lennox & Addington is in a regional network of seven hospitals, each with its own EHR. Catt explains: *“As there is no regional EHR, I am convinced that Dedalus' ECM, together with Enterprise Imaging, can create a regional level solution. Thanks to its seamless integration, in the future each hospital will be able to maintain its own EHR, with the ECM providing the shared access to the patient documentation. This means that if a patient goes to any of the hospitals in the network, they will be able to access our patient chart, with all information. That's a very important capability for us.”*

### Dedalus' Contribution

Dedalus' ECM supports continuity of care and value-based patient care by enabling the sharing of full medical images and documents with existing clinical systems to help create a clinically rich **'visual healthcare infographic'** of each patient. Through careful and knowledgeable project management and team work, the Dedalus team supported Lennox & Addington to prepare for and implement the ECM in a condensed time frame, including integrating it with the hospital's existing EHR and modalities throughout the enterprise. In addition, Lennox & Addington wanted a solution that would integrate seamlessly with the EHR, while remaining independent from it, to support business continuity in the event of a catastrophic failure. Dedalus' ECM fit the bill.



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