

The Holy Grail of Healthcare: One Patient, One Record



Orion Health Case Study



NEWFOUNDLAND AND LABRADOR CENTRE FOR HEALTH INFORMATION

Newfoundland and Labrador,
Canada

www.nlchi.nl.ca

Organisation Type Centre for Health Information

Products Implemented Orion Health Clinical Data Repository
Clinical Portal
Rhapsody Integration Engine

Key Benefits

- Single aggregation point for patient health information province-wide offers significant business and clinical benefits, from the health system level to the frontline circle of care

The technology we now have in place allows us to create a more **patient-centric healthcare environment...** The enhanced access to quality health information supports timely and more informed health care decision-making across our healthcare system.

STEPHEN CLARK,
CEO, Newfoundland and Labrador Centre
for Health Information



The Customer

The Newfoundland and Labrador Centre for Health Information (NLCHI) is a provincial crown agency that supports the development of data and technical standards, maintains key health databases, carries out analytics and evaluation and supports health research. NLCHI supports the regional health authorities, as well as the patients and communities they serve, in the delivery of information technology and digital health services applied in the healthcare system to provide quality care.

In collaboration with the Provincial Government, the province's four regional health authorities and Canada Health Infoway, NLCHI is also responsible for the development, implementation, adoption and ongoing governance of initiatives to support the transformation of healthcare province-wide. This includes, the Pharmacy Network, the provincial Client Registry, the Picture Archiving and Communications System (PACS), the Electronic Medical Record (EMR) and the Electronic Health Record (EHR).

The Challenge

Through the efforts of Canada Health Infoway, it has become widely accepted that the Holy Grail in Canadian healthcare is a pan-Canadian EHR – a single, secure and comprehensive health record for each citizen that is accessible by any authorised care provider across the country who is part of a patient's circle of care.

NLCHI is now well on its way to meeting that goal within Newfoundland and Labrador, through the implementation of HEALTHe. HEALTHe NL is a Provincial Electronic Health Record based on the pan-Canadian EHR vision described in the Infoway EHRs Blueprint.

The EHR provides a single, consolidated repository for a broad spectrum of patient information, including: drug prescription and medication records; laboratory test results, such as blood tests; medical images and radiology reports; care plans and discharge summaries; clinical documents and mental health reports; immunisations; and hospital encounters. Recently, NLCHI added ordering services for both the cardiology and vascular labs to enable primary care physicians to order and book appointments with both specialty areas at the point of care.

HEALTHe NL is improving information access and decision-making by authorised clinicians, thereby enhancing patient care and safety.



The Process

Fundamental to the HEALTHe NL strategy and the implementation of a province-wide EHR was the need for a network infrastructure that would allow patient data to be pulled from multiple disparate systems, stored in a secure central database and easily accessed by care providers such as physicians, nurses, allied health professionals and other healthcare providers.

As the result of a request for proposal (RFP) exercise and the Province's public procurement process, NLCHI chose Orion Health to provide that infrastructure. The solution would be based on an Orion Health technology stack consisting of Orion Health's Clinical Data Repository, Clinical Portal and Rhapsody Integration Engine.

The RFP core evaluation team included representatives from areas of expertise internal and external to NLCHI, such as technical architecture, privacy & security, clinical standards and change management. Orion Health met the requirements specified in the RFP, including technical, business, clinical and cost.

Extensive experience with EHR projects and best practices across Canada and around the world made Orion Health a natural choice and allowed them to serve as 'trusted advisors' to NLCHI throughout the HEALTHe NL project.

A major milestone achieved along the HEALTHe NL implementation pathway was the launch of the Pharmacy Network, which,

connects the province's community and hospital-based pharmacies to a single, centralised Drug Information System (DIS) and created a database of patient medication profiles.

The Orion Health Clinical HEALTHe NL gives authorised users, primarily pharmacists and healthcare professionals, in regional health facilities and community practices web-based access to the patient medication database.

Throughout the process, the Orion Health effectively resolved technical challenges associated with the implementation of HEALTHe NL without impacting Pharmacy Network operation.

Today, the Pharmacy Network contains 614,879 medication profiles. Main benefits are showing up in emergency departments and in mental health settings.

"By using HEALTHe NL to access a patient's medication profile before prescribing medication, emergency room physicians and nurses, for example, can quickly verify what drugs a patient may already be on, thereby reducing the chance of an adverse drug event," says Cynthia Clarke, Director, eHealth Programs - Community and Virtual Care with the Newfoundland and Labrador Centre for Health Information, who reports that as of December 2019, there were more than 8000 users signed up for HEALTHe NL.

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powered by Orion Health
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STEPHEN CLARKE,
CEO, Newfoundland and Labrador Centre
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The Results

For Newfoundland and Labrador, the HEALTHe NL EHR is the aggregation point for all patient data and provide the single, consolidated “one patient, one record” view. It is bringing a wide range of benefits, from the health system level to the front line.

At the system level, a reduction in duplicate testing, such as tests and medical laboratory, will help to reduce healthcare costs. Closer to the front line, improvements fall into three categories:

1. inter-professional collaboration and communications for better patient care
2. clinician decision-making
3. patient safety.

Citing one example, Clarke says, “We are seeing cases where the collaboration between an ER physician and a community pharmacist has been more proactive, effective and timely because HEALTHe NL allows them both to see what is going on with their patient.”

In addition to earlier initiatives such as Client and Provider Registries and Telehealth that are now being integrated into the EHR context, there will be other clinical information that healthcare providers will want to share at a provincial level. New initiatives such as eOrdering and eConsult are being integrated into HEALTHe NL which will allow physicians further capability in utilising technology to provide safe and comprehensive health care.

“I believe that HEALTHe NL, powered by Orion Health technology, will be a key enabler to facilitate better healthcare in our province,” concludes Clarke.

Orion Health

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The Solution

“HEALTHe NL incorporates and allows clinicians across the province to access and share, patient data from multiple data sources and systems throughout the province’s four regional health authorities,” states Clarke.

The EHR is based on Orion Health’s Clinical Data Repository (CDR) and accessed via web-based HEALTHe NL. Using HEALTHe NL from anywhere they have Internet access, users are able to quickly and easily access an extensive array of results and reports resulting from documented patient encounters. Patient information is pulled from other systems by Orion Health’s Rhapsody Integration Engine, which normalises the various data formats and stores the data in the EHR. This data includes, for example:

- Immunisations
- Medication profiles and histories
- Laboratory test results
- Medical images and radiology reports
- Discharge summaries
- Clinical documents
- Mental health reports

Rolling out a provincial EHR is a significant undertaking, requiring a lot of work to build awareness of the potential benefits amongst stakeholders, health system partners and end users and to encourage and support adoption across the province. To support the roll-out, NLCHI implemented comprehensive communications and change management programs targeting both primary and acute care and has established a fully equipped provincial service desk to provide Tier 1 and Tier 2 EHR user support.

Although NLCHI conducts these programs largely on its own, based on expertise they have developed in house, they use Orion Health to train the NLCHI trainers, who in turn train EHR end users.

“The Centre has worked with the same Orion Health team here onsite in Newfoundland and Labrador since 2010, all of whom have been fantastic to work with,” states Clarke. “It’s a small, agile team that has been extremely effective at understanding our environment, both clinically and technically, and fine-tuning their EHR solution to meet our jurisdictional needs.”



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