

# COVID-19

The COVID-19 Pandemic Event evoked an unprecedented response across private and public sectors, requiring businesses in all industries to mitigate an enormous organizational resilience risk. For the Newfoundland and Labrador Centre for Health Information (NLCHI), already in the middle of a major organizational transition as the lead for a shared services approach to manage eHealth services, the Provincial eHealth model, the business disruption was exponentially impactful, requiring us to evolve and innovate very quickly.

Through extraordinary effort, using strong crisis management processes to guide our way, we were able to focus on our clients and stakeholders to address their issues proactively and sustainably, and offer solutions that were not thought possible mere months earlier. While we maintain focus on our long-term goals, this event has given us an opportunity to review our strategy, and to raise our profile, identify new innovations and re-prioritize activities.

For NLCHI, the risk is not over and active mitigation is still ongoing as we monitor the trajectory of the event. We are following a roadmap of four main phases, as we move from being in a reactive mode to proactively and strategically planning for our long term priorities, building on our recent achievements.







#### **Key Accomplishments**

- Enabled people to visit their providers using digital virtual care technologies
- Enabled people to view their negative COVID-19 test results electronically
- Developed a COVID-19 Tracker for use by the Provincial Government and regional health authorities (RHA)
- Developed an Acute Care Report to track COVID-19 statistics
- Enabled NLCHI and RHA employees to work from home

- Helped develop the COVID-19 Data Hub, a public resource to track the pandemic in Newfoundland and Labrador
- Developed provincial lab dashboard & analytical tools for the Department of Health and Community Services (HCS) & RHA Public Health leadership
- Developed the COVID-19 Swab Test/Assessment Clinic Referral Application
- Organically fostered a more cohesive and productive NLCHI culture in the face of unprecedented change with the use of technology

875%

Increase in NLCHI & RHA staff ability to work from home since COVID-19 onset 300+

Virtual Care devices provided for citizen visits with clinicians and/or family

COVID-19 portal users and application referrals

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# Letter from the Board Chair

On behalf of the Newfoundland and Labrador Centre for Health Information's Board of Directors, I present the Centre's 2020-23 Business Plan in accordance with the requirements set out by the **Transparency and Accountability Act.** 

NLCHI provides quality information to health professionals, the public, researchers and health system decision makers. Through collaboration with the health system, NLCHI supports the development of data and technical standards, maintains key health databases, provides analytics, evaluation and decision support services and supports health research. NLCHI is also responsible for delivering provincial digital health solutions such as the electronic health record and electronic medical record. In 2018, NLCHI's mandate was broadened to include support of the regional health authorities in the delivery of information technology and eHealth services.

The health system in Newfoundland and Labrador is going through significant change and NLCHI is playing a key role in enabling that change. Information and technology tools are key to enabling healthcare transformation such as the expansion of primary care. We also acknowledge the fiscal climate in Newfoundland and Labrador and we are committed to finding technological solutions that will help to improve efficiency and allow resources to be diverted from administrative functions to front-line care.

Finally, the COVID-19 crisis has reinforced the need for a robust and efficient system to provide care virtually, not only to improve geographic accessibility, but also to reduce the risk of disease transmission. NLCHI is a leader in virtual care and we will continue to strengthen our capacity in this area. We will also provide responsive and flexible solutions to Government of Newfoundland and Labrador Public Health leadership as they manage the ongoing public health pandemic.

NLCHI envisions a future where technology and quality information empower citizens to make decisions to take control of their health and to improve healthcare in Newfoundland and Labrador. This plan focuses on the trends, issues and opportunities that were identified based on direction from the Provincial Government and feedback gathered from stakeholder engagement sessions. It focuses on moving Newfoundland and Labrador toward a future that is brighter, has a better economy, healthier people, better standard of living and a more efficient public sector.

The vision for NLCHI is further defined in the mandate letter to the Minister of HCS, which includes: strengthening NLCHI to drive innovation, efficiency and care; moving toward a digitized healthcare system, including making advancements in eHealth; continuing to focus on building a highly integrated Electronic Health Record that includes all citizen information available in one place; and expanding virtual care services – giving access to providers in the community.

This new three year plan will provide the direction for digital health in our province, allowing us to connect care providers and support the digital transformation of the healthcare system within four main areas of focus: digital health solutions; data and information services; digitally enabled citizens; and exceptional workplace, exceptional service.

Annually, NLCHI will identify specific, measurable objectives that are directly linked to achieving the four main areas of focus. NLCHI's Board of Directors acknowledges accountability in preparing this plan and achieving the specific goals and objectives outlined within. The Board looks forward to sharing our success in achieving these goals on an annual basis.

Sincerely,

Dr. Kris Aubrey-Bassler

# Introduction

Healthcare, like all sectors in the 21st century, is being driven by data. Information from this data is required for decisions at all levels of the healthcare system from front line care delivery to the policy development level, locally and around the world.

The use of data has created the specialization within healthcare referred to as "digital health". Digital health is the use of information technology, electronic communication tools and services to support delivery of healthcare services and facilitate better health. Healthcare professionals, researchers and administrative leaders are demanding accurate real-time information be available for decision making at all levels, and digital health is the gateway to provide that information.

Our plan is to connect citizens with their own health information

NLCHI can make foundational enhancements, as well as innovative, large-scale health system changes within the priority areas of primary healthcare, mental health and addictions, and homecare, using digital health.

Our province is geographically spread out, but technology has a unique way of digitally bringing people together.

Our vision for the future includes connecting people with the health system and their own health information, giving people broader access to healthcare in rural communities, connecting clinicians with their peers and specialists locally and across the country, and connecting administrators with the information they need to positively impact healthcare delivery in Newfoundland and Labrador.

Using digital health, NLCHI can enable faster, geographically equitable access to health services and supports. NLCHI is committed to working with our partners to find innovative ways to address

challenges faced in delivering health services to all of our citizens.



Healthcare has a "citizen first" focus in today's world, and in Newfoundland and Labrador, HCS and the RHAs have many strategies that focus on citizens first, such as the Home First Model,

NLCHI will find innovative ways to address challenges in delivering health services to all of our citizens

and Primary Health Care Action Plans. NLCHI will support our partners' citizen-focused initiatives and bolster safety by providing access to more information in settings where clinicians are working directly with citizens. But at the same time, we will ensure citizens' privacy is protected, as outlined in Newfoundland and Labrador's Personal Health Information Act (PHIA), and will remain focused on cybersecurity.

As well, over the next three years, NLCHI will focus on the existing foundation systems used daily in all citizen-provider encounters. These systems require enhancements to facilitate electronic communication among providers, and information sharing across the health system. NLCHI will make careful, strategic and cost effective investments in foundation systems to improve health system efficiency and support improved effectiveness of healthcare delivery. We will also work to benefit the local economy with expenditures, where opportunities exist.

NLCHI will bolster safety and protect privacy



This plan aligns with the strategic direction from government that continues to move Newfoundland and Labrador to a future that has healthier people and a more efficient public sector. But we recognize, with all of the challenges currently facing the province, this plan will have to be agile to the needs of the health system of Newfoundland and Labrador.

As priorities at the Provincial Government and the RHAs change, we will engage clinicians and citizens, and adjust our plan accordingly.

Leveraging our current operational environment, we will build on our strengths and identify opportunities to make a significant difference in the healthcare system, for clinicians, administrators and the citizens of Newfoundland and Labrador.

# Operational Environment

#### **About NLCHI**

NLCHI was formed in 1996, and became a crown agency of the Provincial Government in 2007. In 2018, legislative changes provided a revised mandate to streamline and advance digital health in Newfoundland and Labrador.

#### NLCHI is responsible for:

- · Providing quality information to health professionals, the public, researchers and health system decision-makers.
- · Supporting the development of data and technical standards; maintaining key health databases; carrying out analytics and evaluation; and, supporting health research.
- · Delivering provincial eHealth solutions such as the electronic health record and electronic medical record.
- · Leading a shared services approach to managing eHealth services across the entire provincial healthcare system.

NLCHI is governed by a Board of Directors represented by a broad group of stakeholders. The following individuals currently comprise NLCHI's Board of Directors:

Dr. Kris Aubrey-Bassler, Chairperson Patsy Coish Snow, Vice Chairperson Pamela Anstey Allan Bradley Elyse Bruce

Shawn Bugden
Tom Bursey
Cassie Chisholm
Dave Heffernan
Cynthia Holden

Ted Howell
Allan Kendall
Dr. Margaret Mary Steele
David Thornhill

NLCHI includes four divisions: Data and Information Services, Clinical Information Programs and Change Leadership, Solutions and Infrastructure, and Corporate Services. To learn more about NLCHI, see appendices for our Lines of Business, information about our Stakeholders and Clients, and a diagram of our governance structure.



# Operational Environment

#### **Our Mandate**

As part of the Provincial Government's approach to developing a province-wide shared services eHealth model for the healthcare system, NLCHI, through its enabling legislation, was mandated to develop and implement a Provincial eHealth Model. This model will coordinate the information technology and information management functions of the four regional health authorities and NLCHI into one provincial solution, in order to:



#### Centre for Health Information Act, 2018

The objectives of NLCHI are:

- to protect the privacy of individuals whose personal information or personal health information is collected, used, disclosed, stored or disposed of by NLCHI in accordance with the Access to Information and Protection of Privacy Act, 2015 and the Personal Health Information Act; and
- to assist and support individuals, communities, RHAs and other health service providers and policy makers at federal, provincial and regional levels to enhance the health and well-being of persons in the province through the planning and delivery of health and community services by:
  - (i) developing, operating and managing a comprehensive and aligned information system,
  - (ii) developing data and technical standards and keeping them up-to-date,
  - (iii) managing provincial health data and information assets,
  - (iv) preparing health reports and conducting applied health research and evaluation, and
  - (v) providing health analytics and decision support services.

The complete Centre for Health Information Act is available online

at: www.assembly.nl.ca/legislation/sr/statutes/c05-2.htm

Making Connections... eDOCSNL is the Provincial Electronic Medical Record (EMR) program for Physicians jointly governed by the NLMA, DHCS, and NLCHI, to deliver and manage EMRs in the Province

- 401 providers
- 158 added in 2019
- 60% of population have a digital record

# Operational Environment



Employees

\* as of March 31, 2020

21.4%

**Employees with Advanced Degrees** 

Average age of staff

Evaluation

Provincial & Regional initiatives

# **SERVICE DESKS** NLCHI

158,704 service tickets

#### **ACUTE AND COMMUNITY**

21,000

1,800

400

**MEDITECH** users

**Client and Referral** Management System users

Momentum software (Home Care) users

# <u>Telepathology</u>

specimens digitized in 2019

106

users including: -lab assistants -pathologists -support -residents -histotechnologists

\$74,621,671

Annual Budgeted revenue for 2020/21

PACS PICTURE ARCHIVING AND COMMUNICATIONS SYSTEM

672,000,000+ Total images stored

**737.691** images stored in 2019

researcher, health system and public body requests

54 aggregate level

Information Requests

# Foundation Elements



Improved health through innovative technologies and quality information





**Privacy**: Protect data and secure systems entrusted to us.

Collaboration: Seek diverse partnerships; leverage collective imagination and

talent.

Responsiveness: Pay attention. Anticipate stakeholders' needs. React quickly and

positively with quality solutions.

Leadership: Be innovative, visionary and accountable.

Patient Focus: Make patients and our communities central to all decisions.

Trust: Be open, honest, reliable and ethical.

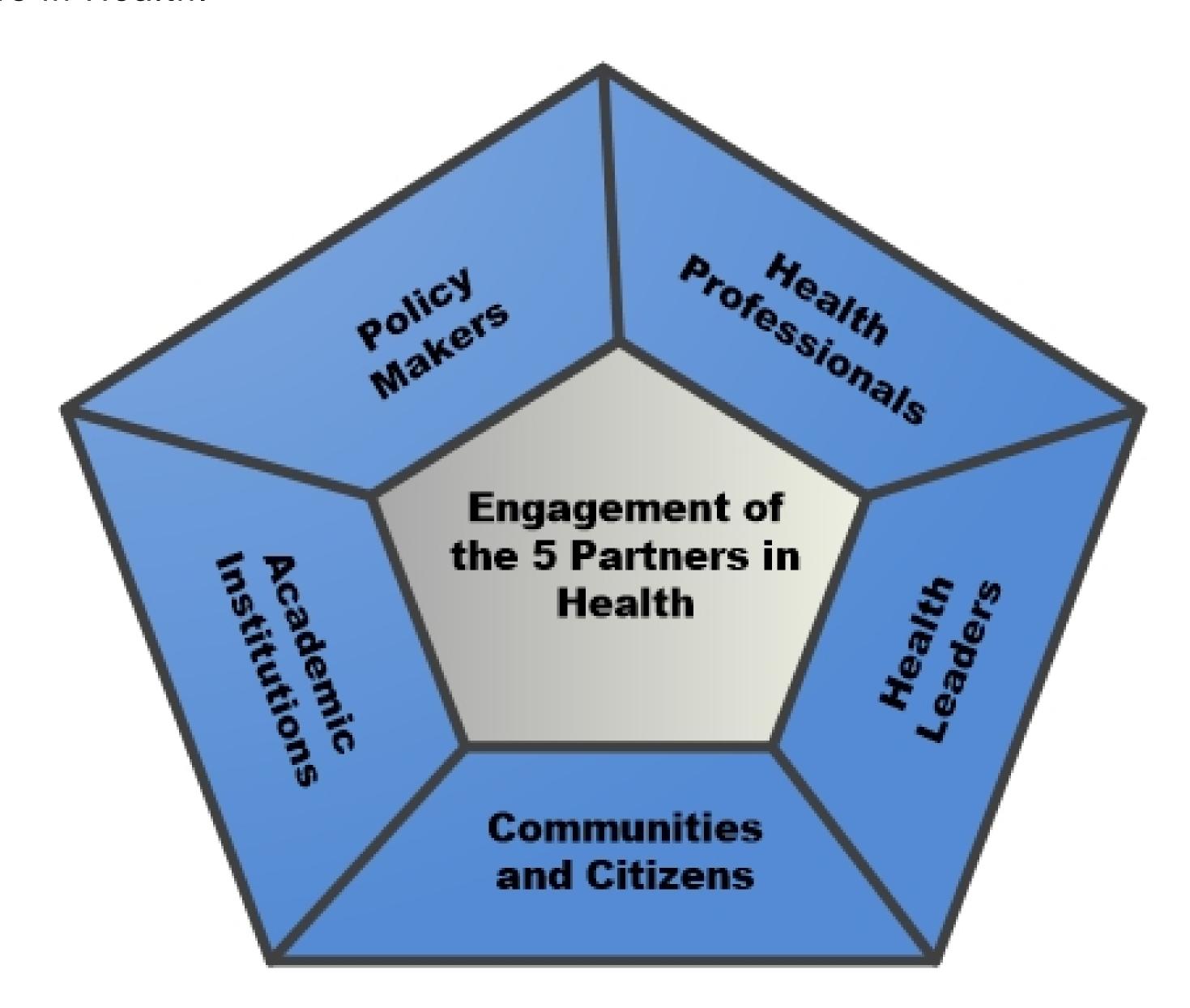
Making Connections...

The Newfoundland and Labrador Telehealth program reduces the need for travel and increases access to healthcare services

- 21,688 appointments in 2019

# Our Planning Process

With NLCHI's expanded mandate to manage the eHealth systems and services for the RHAs, it is important that we ensure that as we move forward, our plans and vision align with those of our key partners. During the past year, NLCHI has implemented an engagement strategy that targeted our Five Partners in Health.



The strategy provided a blueprint for multiple engagement sessions throughout the year with physicians, citizens, RHA's, health system administrators, government representatives, members of the academic community and NLCHI Board members. In all, over 200 people participated in five sessions and through surveys.

As well, we did a number of environmental scans and attended stakeholder and industry sessions, such as Denmark and Ireland Innovation sessions, Health Analytics Summit hosted by NLCHI, RHA strategic planning sessions and meetings with third party vendors and Canada Health Infoway to better understand global strategies around Artificial Intelligence, Data Governance, Patient Access and other key Digital Health concepts and initiatives.

As part of the planning process, the Provincial Government has provided additional strategic direction that continues to move Newfoundland and Labrador to a future that is brighter, and has a better economy, healthier people, better standard of living, and a more efficient public sector.

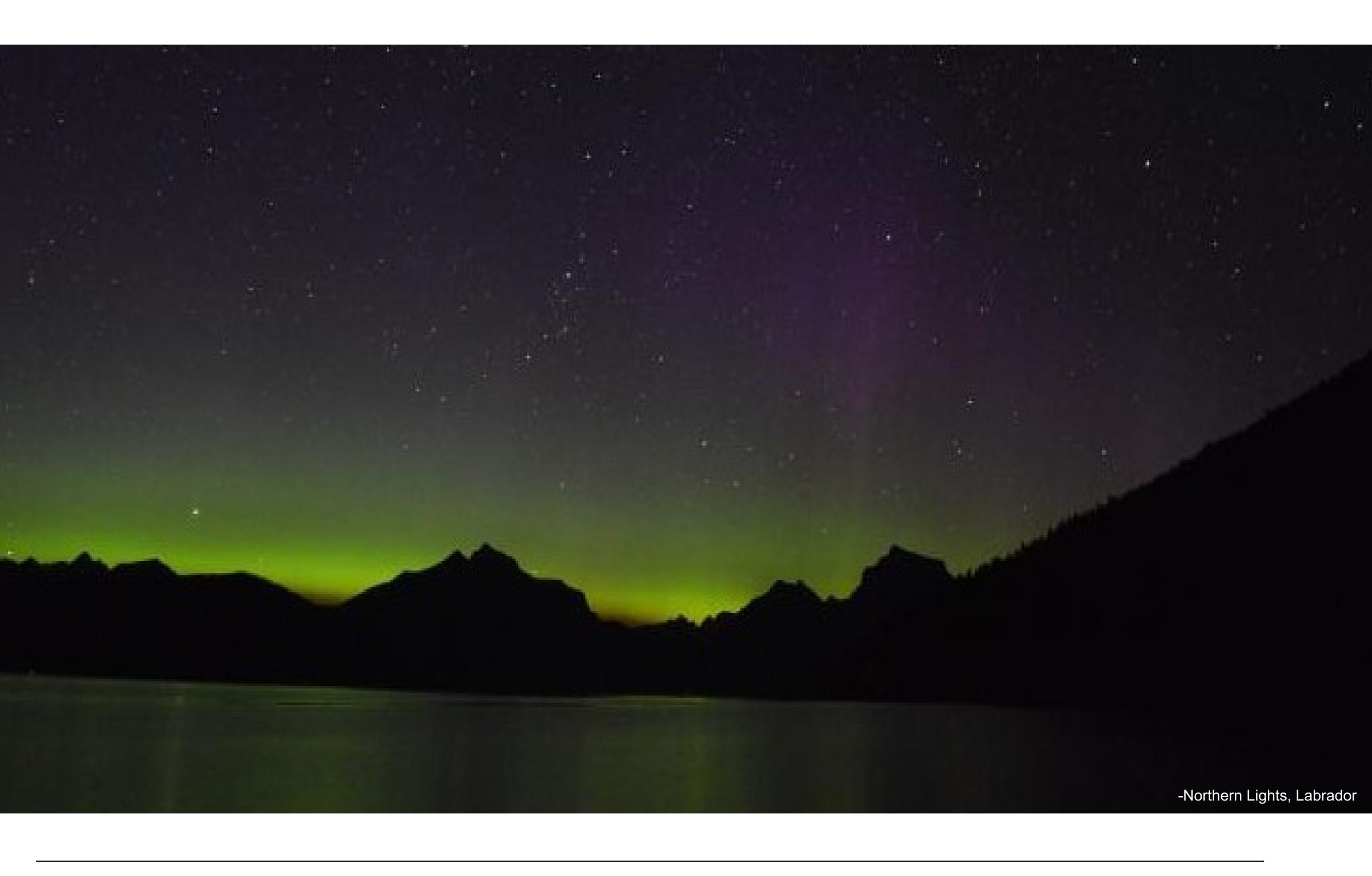
## Making Connections...

# Our Digital Future

Trends, issues and opportunities were identified based on direction from government, and the feedback and information we gathered from the engagement sessions, which helped to shape our vision, our business plan and ultimately, the future and direction of NLCHI for the next three years. These sessions have laid the foundation for NLCHI's vision for the future.

NLCHI envisions a future where technology and quality information empower citizens to make decisions to take control of their health, and to improve healthcare in Newfoundland and Labrador, so everyone can live happier, healthier lives.

Taking into consideration this feedback, we have developed a plan that charts the path to the vision for our future.



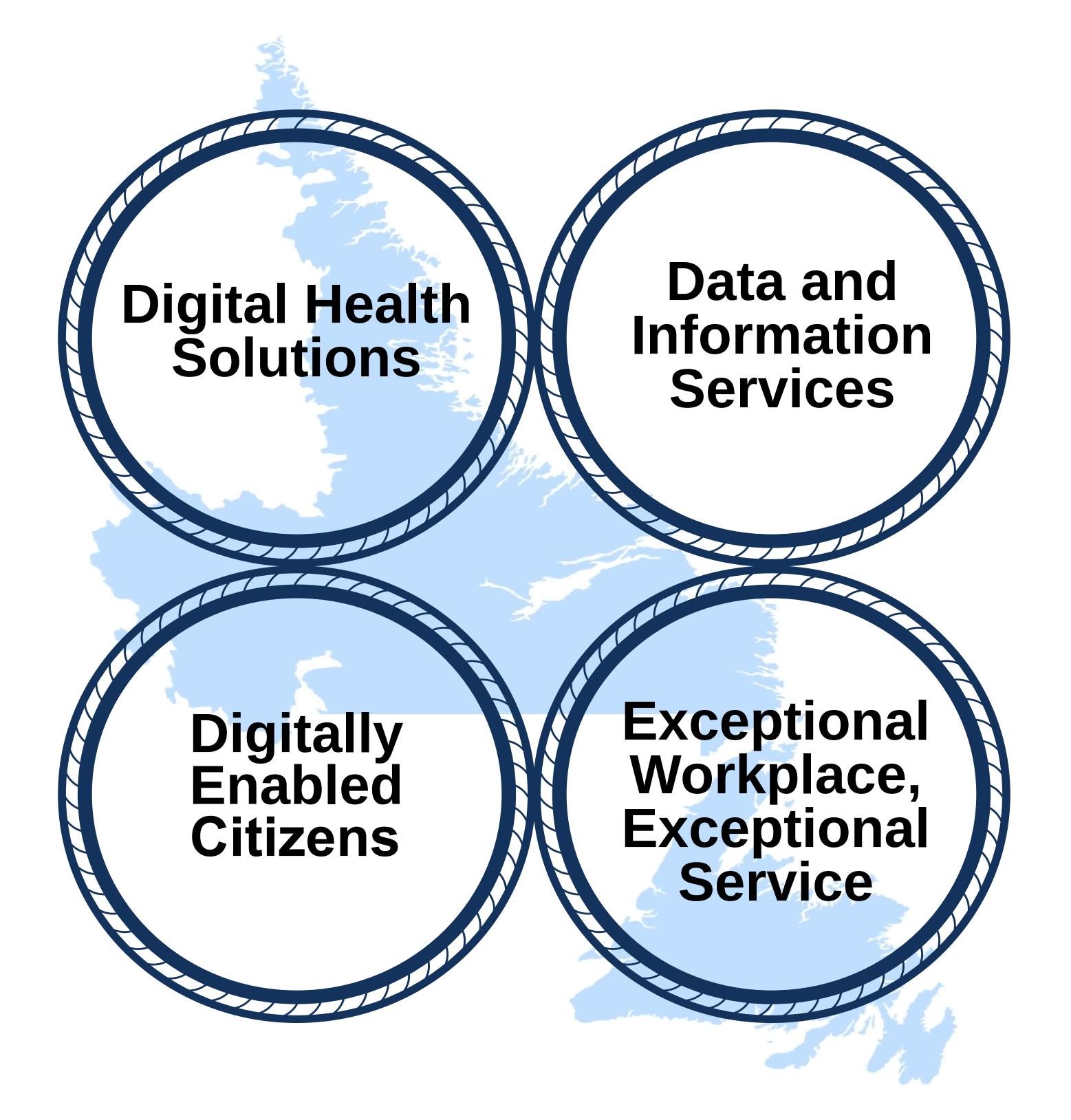
Making Connections...

The Pharmacy Network gives your healthcare professionals access to your medication profile

- 10,700,000+ prescriptions dispensed in 2019

# Roadmap to Success

This business plan will be our roadmap for the next three years, making connections across the province and supporting the digital transformation of the healthcare system, within four main areas of focus:



Within each of these areas of focus, we have identified issues of strategic importance to the province and citizens of Newfoundland and Labrador and have established strategic priorities and goals to address each of these issues over the next three years.



# Theme:

Transform Digital
Health in
Newfoundland
and Labrador

# Issue:

Advance digital health to enable better healthcare

# Priority:

Implement digital health solutions that empower healthcare providers with complete, timely and reliable information

# Goal:

By March 31, 2023, NLCHI will have enhanced and modernized digital health solutions

# Digital Health Solutions

## Advance digital health to enable better healthcare

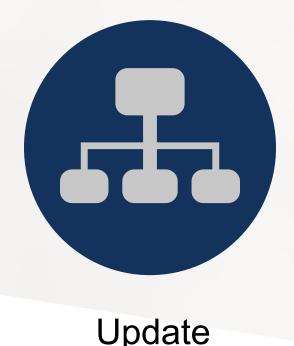
One of the most serious issues facing the province is the health of its population and one of the biggest priorities in the health sector is to ensure the best possible care for its citizens.

The vision is better coordination of care, better information, and greater geographical equality. NLCHI has established a solid foundation for centralizing information to enable the coordination of care, but gaps still exist. These gaps require continued reliance on manual intervention and paper-based processes, and are barriers to getting the right information at the right time to make the best decisions. Information gaps occur when solutions are not fully integrated to communicate with one another, when this occurs it creates challenges in the health system.

As well, the health system is struggling with antiquated electronic systems in the fields of clinical and referral management, and clinical charting, such as CRMS and Meditech that need replacement. NLCHI is exploring opportunities to address these gaps and upgrade these electronic systems.

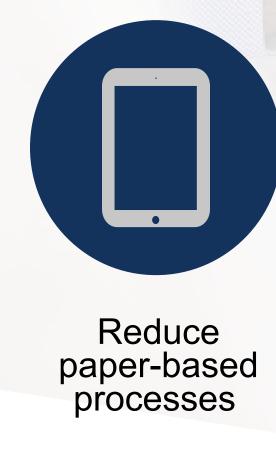
While we have made great progress to provide clinicians with better access to electronic health records (EHRs), the foundational systems upon which the EHR is built can be leveraged to enable better care. Physician documentation and referrals, for example, are largely paper-based, resulting in communication gaps and fragmented information flows that impede continuity of care. Enabling electronic communication mechanisms for all frontline clinical areas, is a priority for clinicians.

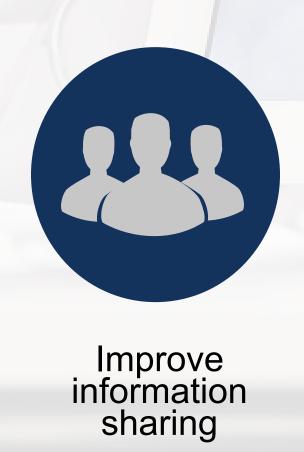
NLCHI's plan over the next three years is to deliver digital health solutions that will close these gaps. Furthermore, by upgrading or replacing outdated systems, NLCHI will enable better, faster, and more efficient care delivery. Solutions are available that can meet providers' demands for convenience, mobility, and automation, thereby enabling them to be more focused on their citizens and less on searching for information and trying to contact colleagues and other members of the care team. Moreover, the advent of technologies such as artificial intelligence and machine learning presents opportunities to drive best practice and to gain new insight into individual citizens' needs as well as the needs of entire populations. NLCHI's ambition to realize the full benefits of digital health supports government's strategic direction and priorities of healthier people, better living and brighter future. It also aligns with the Minister's mandate.



inefficient

systems





# Digital Health Solutions

By March 31, 2023, NLCHI will have enhanced and modernized digital health solutions.

- Goal Indicators: 1. Enabled electronic documentation for select priority front line clinical settings
  - 2. Enabled electronic patient chart sharing among select healthcare providers in the circle of care
  - 3. Enabled mobile access to electronic patient charts to select providers

#### By March 31, 2021:

#### IDENTIFED DIGITAL HEALTH SOLUTIONS FOR SELECT CLINICAL SETTINGS

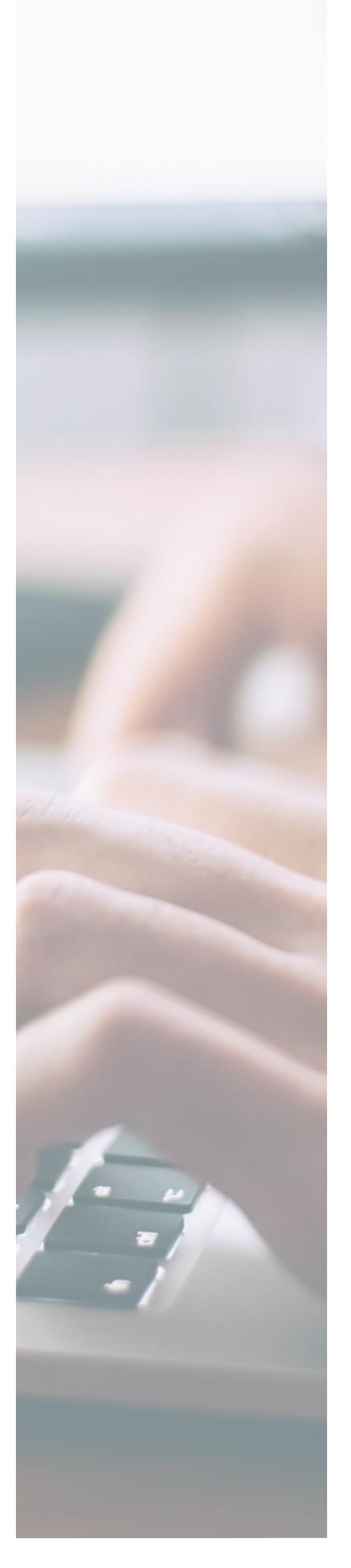
- 1. Established effective stakeholder engagement mechanisms to inform and guide the development of digital health solutions
- 2. Completed an assessment of clinical workflow needs and defined a roadmap to address needs that maximizes the value of existing solutions and identifies priority areas for new investment
- 3. Enhanced functionality and continued adoption of core clinical systems
- 4. Expanded virtual care in the acute and community care settings
- 5. NLCHI will have been responsive and flexible to needs of the health system

#### By March 31, 2022:

DEVELOPED, EXPANDED OR REDEVELOPED DIGITAL HEALTH SOLUTIONS

#### By March 31, 2023:

COMPLETED NEW OR ENHANCED DIGITAL HEALTH SOLUTIONS FOR SELECT CLINICAL SETTINGS





# Theme:

Inform Decision
Making Across the
Health System

# Issue:

Optimize use of data and information for decision making

# Priority:

Support population health and health system planning and management

# Goal:

By March 31, 2023,
NLCHI will have
enhanced
coordination and
appropriate use of
health data,
information and
analytical capacity
in the province

# Data and Information Services

## Optimize use of data and information for decision making

Maintaining provincial health data and providing quality information to support the planning and delivery of health and community services has always been core to NLCHI's mandate. In this time of renewal, we reaffirm our commitment to working collaboratively with our stakeholders to ensure they have the data and information needed to make better decisions, and in turn improve the health of our population.

An expanded mandate has afforded NLCHI new opportunities to strengthen the provincial information infrastructure in support of improved healthcare, health system performance and population health. As a new offering, we look forward to delivering decision support services (e.g., operational and strategic dashboards and reports) across each of the province's four RHAs. Implementation of standardized citizen-reported measures across our health system will support health system decision making that is citizen-centered. Building upon our work as a national leader in information services and data governance we will further improve data governance and coordination of data access to optimize the use of health system resources for research, innovation, and health system management. We will enhance our efforts in exploring partnerships with the private sector to maximize the use of our significant data holdings to realize economic development opportunities for the benefit of the people of Newfoundland and Labrador. With continued development of our data lab we will expand our analytical tools and services to foster better use of data and information.

These goals will be achieved through effective engagement with our Five Partners in Health (i.e., health professionals, health leaders, communities and citizens, policy makers, and academic institutions). An important step forward will be the establishment of a Provincial Health Analytics Council comprised of health system leaders who will identify efficient ways to address the information needs of the health system. The Council will guide the development of actionable products and services so that we can inform meaningful and sustainable health system transformation and improvement.

This priority aligns with the provincial strategic directions of better economy, healthier people, better living and brighter future. It also supports the Health-in-All Policies approach, to "enable our government to make all decisions in a manner that strengthens focus on measurable improvements in our health status."



Improve data quality



Advance utility of data sources

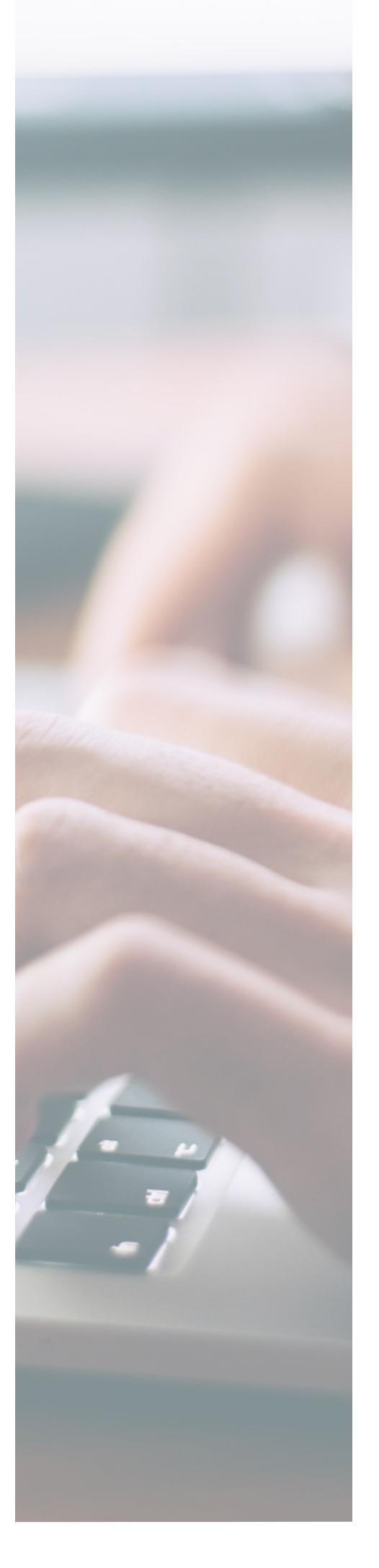


Enhance information used to manage health systems

# Data and Information Services

By March 31, 2023, NLCHI will have enhanced coordination and appropriate use of health data, information and analytical capacity in the province.

- Goal Indicators: 1. Enabled timely access to quality data and information products and services
  - 2. Coordinated data and information services in response to health system needs
  - 3. Leveraged and implemented tools and support for decision making



#### By March 31, 2021:

#### ENHANCED COORDINATION OF PRODUCTS AND SERVICES

- 1. Formed the Provincial Health Analytics Council
- 2. Expanded select decision support services across the health system
- 3. Supported provincial data governance that enables health system management, research and economic development
- 4. Launched a data access navigation service
- 5. Piloted users accessing research and evaluation environment in data lab
- 6. Flowed electronic medical record data to the data lab
- 7. Created an inventory of health system surveys

#### By March 31, 2022:

SUPPORTED THE ENHANCED USE OF DATA AND INFORMATION

#### By March 31, 2023:

ENHANCED ANALYTICAL CAPACITY IN THE PROVINCE



# Theme:

Digitally Enable Healthier Living

# Issue:

Enable citizen
digital
engagement with
health system

# Priority:

Support and enable healthier living for residents of Newfoundland and Labrador

# Goal:

By March 31, 2023, NLCHI will have digitally enabled citizens to be active partners in their healthcare

# Digitally Enabled Citizens

## Enable citizen digital engagement with health system

The increasing burden of chronic illnesses and an aging population, combined with the current fiscal situation in the province create challenges for government to find the best value while continuing to provide quality and sustainable healthcare services to the citizens of this province. Digital solutions are an important enabler of the transformations required to address the challenges in the healthcare system. They have the power to improve health, transform quality and reduce health system costs.

Increasingly, citizens use online information and tools to educate themselves and help manage their own care. In recent years, Personal Health Records (PHRs) have emerged as a tool for citizens to access their own medical information such as lab results and prescription lists and better participate in the management of their care. Enabling citizens to hold and share their own health information will have a transformative effect on healthcare delivery in this province by improving the flow of information and delivering more effective clinical decision-making.

Within Canada over the past decade and within this province in particular, Electronic Health Record (EHR) systems have made considerable progress in integrating information across the health system to create integrated records, enabling safer, improved care. Up to this point in Newfoundland and Labrador, we have primarily invested in putting the foundational building blocks in place and implementing improved digital tools for clinicians, such as the provincial Electronic Medical Record (EMR), to take advantage of the integrated EHR data. With the EHR and EMR systems in place, we are in a solid position to enable citizen access to digital health information for people across our province. In speaking with residents and patient representatives, we have learned that citizens want to be involved in their healthcare and we know that citizens who are engaged will be empowered to better manage their own health to support better outcomes.

Over the next three years, NLCHI has committed to support and enable healthier living for residents of Newfoundland and Labrador, through digital engagement. The PHR is the foundation to provide citizens with access to key clinical information, improve access to communications between citizens and their healthcare provider team and to enable citizens with access to digital tools to enhance their overall health system experience. The PHR is a key component of NLCHI's business plan and will be achieved through strong citizen and provider engagement as we begin implementation of this foundational program.



Give citizens access to health information



Empower citizens to manage their own health



Give citizens digital access to healthcare team

# Digitally Enabled Citizens

By March 31, 2023, NLCHI will have digitally enabled citizens to be active partners in their healthcare.

- Goal Indicators: 1. Implemented a personal health record platform that gives citizens access to their personal health information
  - 2. Increased citizen's access to digital health services including virtual care visits from home

#### By March 31, 2021:

#### ESTABLISHED FOUNDATIONAL ELEMENTS FOR THE PHR PROGRAM

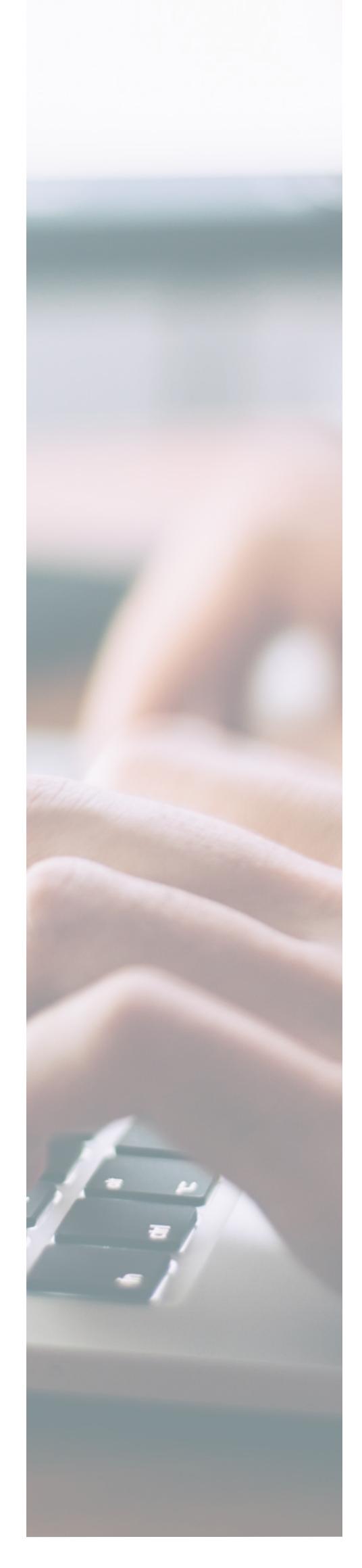
- 1. Implemented a solution to give citizens access to their personal health information as well as digital health services
- 2. Ensured identity and consent management framework is in place
- 3. Created a virtual engagement forum with providers and citizens to establish a roadmap for access to personal health information and digital services
- 4. Continued expansion of virtual visiting from physician offices into the citizens home
- 5. Enabled citizens to book identified top priority clinic appointments online using digital technology
- 6. Enabled citizens with access to immunization records

#### By March 31, 2022:

EVALUATED PHR PROGRAM AND ENHANCED FUNCTIONALITY BASED UPON HEALTH SYSTEM PRIORITIES

#### By March 31, 2023:

ENHANCED ADOPTION AND FUNCTIONALITY OF PHR PLATFORM



# Theme:

Revolutionize Digital
Health Service
Delivery

# Issue:

Realize vision for provincial eHealth model

# Priority:

Create an exceptional workplace that delivers a consistent and reliable service and uses innovation to drive an integrated, digitized health system

# Goal:

By March 31, 2023,
NLCHI will have
become a dynamic
organization that
improves digital
health service
delivery in
Newfoundland and
Labrador

# Exceptional Workplace, Exceptional Service

## Realize vision for provincial eHealth model

In 2018, the **Centre for Health Information Act** was changed to include an expanded mandate that established the framework for a shared services eHealth delivery model. This shared services model for digital health will ultimately bring together staff from the five different health organizations under one umbrella. This transition process brings significant change to all employees and the stakeholders NLCHI services, and needs to be managed correctly. While daunting, the transition is not the end game but rather, it will enable the transformation of digital health in Newfoundland and Labrador. People are at the core of our service delivery model. While technology may enable healthcare, it is the dedication, drive and commitment of our workforce that will ultimately determine our success.

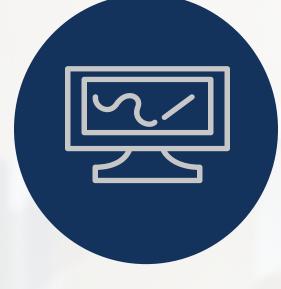
NLCHI recognizes that an exceptional workplace and culture will attract and retain its top talent, to realize the full potential of a service delivery organization that provides consistent and reliable service. Our new shared services organization will support our managers and staff in achieving their work priorities. Clear and consistent policies will be developed and human resource programs implemented that support the organization's new mandate. As well, we will develop or enhance strategies and programs to deliver quality provincial digital health services that bring our stakeholders value.

The focus on these fundamental priorities will create a culture aligned with our values that fosters growth, respect, and passion to support the well-being of our staff and enable them to achieve their own personal goals in support of our organization's goals. This change brings huge opportunity to leverage the significant talent that works tirelessly every day for the people of this province. While separately these individuals achieved great results, working together with a shared mandate and culture provides endless opportunities to realize benefits for Newfoundland and Labrador.

Over the next three years, NLCHI will be focused on revolutionizing digital health service delivery that enables a high-performing health system. As well, we are committed to fostering a workplace and culture that promotes creativity and innovation, and supports a healthy and respectful work environment. This ambition supports government's strategic direction and priorities of healthier people, better living, brighter future and a more efficient public sector. It also speaks to the mandate outlined to the Minister that we need to drive innovation, efficiency and citizen care.



Build dynamic and energetic culture



Deliver quality services to stakeholders



Promote healthy habits for staff

# Exceptional Workplace, Exceptional Service

By March 31, 2023, NLCHI will be a dynamic organization that improves health service delivery in Newfoundland and Labrador.

- 1. Delivered consistently reliable services to our stakeholders
- 2. Implemented the eHealth shared services model
- 3. Established feedback loops for stakeholders
- 4. Established the role of digital health professional in health care
- 5. Defined and communicated nimble and responsive stakeholder engagement processes
- 6. Improved efficiency through sound fiscal stewardship and streamlined processes

#### By March 31, 2021:

ESTABLISHED FOUNDATIONS THAT SUPPORT STAFF AND STAKEHOLDERS TO SUPPORT THE ADVANCEMENT OF DIGITAL HEALTH IN NEWFOUNDLAND AND LABRADOR

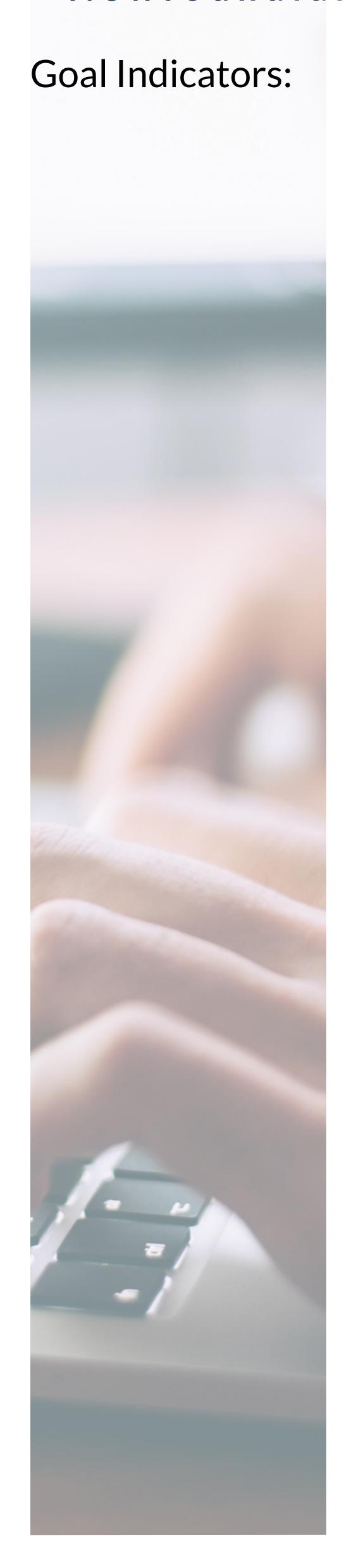
- 1. Completed key elements of eHealth transition
- 2. Developed strategies and tactical action plans for functional and key priority areas
- 3. Built evaluation mechanism to measure and track staff and stakeholders' satisfaction and quality improvement opportunities
- 4. Developed Human Resource policies and/or other health system improvement initiatives that support alternate work arrangements
- 5. Implemented health system management solutions that are improving efficiency and sustainability
- 6. Developed a quarterly operational reporting metrics dashboard to NLCHI key stakeholders, specifically the RHAs

#### By March 31, 2022:

ENHANCED ORGANIZATIONAL BEST PRACTICES AND STRENGTHENED NLCHI'S CORPORATE IDENTITY

#### By March 31, 2023:

ESTABLISHED THE FUTURE OF NLCHI USING DIGITAL HEALTH TO LEAD INNOVATION AND DELIVER QUALITY AND VALUE TO STAKEHOLDERS



# Looking Forward

We recognize, in our sector in particular, the necessity of being agile as an organization and having the ability to anticipate and quickly respond to changes.

Disruptions, risks and opportunities, in our environment, such as variations in the provincial economy, shifts in provincial priorities and resource constraints, can lead to changes in strategic context that require a dynamic approach to updating our business plan to remain relevant and responsive. So we have built a formal review process into our plan to ensure that we take time to regularly reflect on our strategic risk profile and priorities, to ensure alignment with direction and guidance from our Board and Government.





Enhanced and modernized digital health solutions



Be a dynamic organization that improves digital health service delivery in Newfoundland and Labrador



**Data & Information** Services

Enhanced coordination and appropriate use of health data, information and analytical capacity in the province



**Digitally Enabled** Citizens

Digitally enabled citizens to be active partners in their healthcare





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# Appendix A

#### **Lines of Business**

NLCHI provides quality information to health professionals, the public, researchers and health system decision makers.

Through collaboration with the health system, NLCHI supports the development of data and technical standards, maintains key health databases, carries out analytics and evaluation and supports health research.

NLCHI supports the RHAs, as well as the citizens and communities they serve, in the delivery of information technology and eHealth services applied in the healthcare system to provide quality care.

NLCHI's mandate also includes the development and implementation of a confidential and secure provincial electronic health record as well as other provincial clinical information programs, including the change management required to support adoption by end user clinicians.

NLCHI's projects and programs are provincial in scope – they are available to all clinicians and health system decision makers in the province, regardless of location.

To protect the privacy of individuals whose personal information or personal health information is collected, used, disclosed, stored or disposed of by NLCHI in accordance with the **Access to Information and Protection of Privacy Act (ATIPPA)** and the **Personal Health Information Act** (PHIA).

#### Provincial eHealth Model

In 2018, NLCHI became the provincial lead for a shared services approach to managing eHealth services across the healthcare system.

eHealth is all of the electronic, communication and technology tools used to share health and administrative information and includes services provided at NLCHI and the four RHAs – Eastern Health, Central Health, Western Health and Labrador-Grenfell Health.

NLCHI will leverage existing capability from within the healthcare system to build a more streamlined and provincially focused process for delivering and managing eHealth services. The primary functions that are part of the Provincial eHealth Model include:

- · analytics, evaluation, and decision support
- data quality and standards
- application support
- application development
- projects and programs
- infrastructure
- customer support
- privacy and security

#### Lines of Business, cont'd

#### **Data and Information Services**

Data and Information Services has provincial oversight for the delivery of a full range of information products and services in support of health system management including health analytics, data access, applied health research, evaluation, performance improvement, data and information management, business intelligence, decision support and data quality and standards. Data and Information Services ensures appropriate and timely response to requests for data and information from health system stakeholders and the public. They also support health system management and change through information, obtained through health analytics, evaluation and business intelligence, as part of a comprehensive approach to supporting system transformation which also includes an emphasis on building capacity in the system for continuous quality improvement.

#### **HEALTHe NL**

NLCHI developed HEALTHe NL, the provincial electronic health record (EHR). HEALTHe NL is a secure and private record of a person's healthcare information, available electronically to authorized healthcare professionals. It is designed to facilitate better sharing and interpretation of health information among health professionals involved in a person's care regardless of location. HEALTHE NL is one of the most comprehensive EHRs in Canada. It provides more accurate and reliable data to support improved healthcare delivery, decision-making and policy development. The following are the components of HEALTHE NL:

- Pharmacy Network- gives your healthcare professionals access to your medication profile.
- Client Registry- used to accurately identify individuals registering at hospitals, community health centres and connected pharmacies across the province.
- Lab Reports and Clinical Reports- allows clinicians to view laboratory results regardless of where providers or citizens are located.
- Picture Archiving and Communications System (PACS)- allows healthcare providers across the province to digitally view, manage, share and store images and related medical reports on a secure computer system from any location, regardless of where the test was performed.
- Client and Referral Management System (CRMS)- is an integrated electronic information system designed to meet objectives in the area of client management and referral management for clients receiving community-based services from the regional health boards.
- Provider Registry- integrates with components of the provincial electronic health record and the Pharmacy Network to ensure accurate identification of health professionals involved in the care and treatment of individuals.

#### Lines of Business, cont'd

#### **eDOCSNL**

eDOCSNL is a joint partnership between the Government of Newfoundland and Labrador, the Newfoundland and Labrador Medical Association (NLMA) and NLCHI. The eDOCSNL program provides support for the implementation, adoption and use of the provincial electronic medical record (EMR) solution in participating healthcare provider offices across the province.

An EMR is a computer-based medical record specific to one clinician's practice. It manages citizen information previously stored and recorded in paper files or another EMR including detailed demographics and medical and drug history, laboratory results and diagnostic imaging. The EMR also helps to manage a physician's billing and scheduling activities.

eDOCSNL is integrated with HEALTHe NL, which allows clinicians to access drug history, hospital records, diagnostic information such as laboratory results and findings from diagnostic imaging. Clinicians can also view immunization reports from the RHAs.

#### **Virtual Care**

NLCHI is responsible for virtual care programs including the Provincial Telehealth Program and the Provincial Telepathology Network.

Telehealth uses videoconferencing to connect citizens to healthcare providers who are not located in the same community. Telehealth reduces the need to travel and increases access to healthcare services. In 2018/19, there were 21,688 telehealth appointments – a number that continues to grow year over year. The team is also launching Home Based Telehealth, which allows citizens to use their own technology to have a virtual visit with their healthcare provider in the comfort of your own home or other convenient location.

The Provincial Telepathology Network was officially launched in July 2016. Telepathology uses telecommunication technology to facilitate the review of image-rich pathology data between locations for the purposes of secondary consults, education, quality assurance and research. With this technology, pathologists in the province have access to a secure connection to perform secondary consults for their peers throughout the province.

# Appendix B

#### **Stakeholders and Clients**

NLCHI's accomplishments are due in part to strong relationships with health professionals, system administrators and policy makers as well as the private sector. Support from the Provincial Government and specifically, HCS, enables NLCHI to provide significant value to the provincial health system. Ultimately, the NLCHI's primary clients are the citizens of Newfoundland and Labrador. By providing quality health information and innovative eHealth solutions to healthcare professionals in the province that deliver care, NLCHI supports population health through its programs and services.

This past year, NLCHI became the provincial lead for a shared services approach to manage eHealth services across the four RHAs. Building on NLCHI's relationship with the RHAs, the five organizations are now working together, with leadership from NLCHI to further enhance eHealth services across the healthcare system. The goal is to deliver modern and innovative digital health tools and solutions; enable enhanced clinical decision making; improve healthcare delivery and patient safety; establish one patient-one record in all clinical settings; support health system planning; and empower citizens with access to their health information. In addition to leading eHealth services, NLCHI continues to provide analytic and evaluation support to the RHAs.

NLCHI also works with a number of other provincial and national stakeholder groups including Canada Health Infoway, the Canadian Institute for Health Information, regulated health professions and provincial health-related academic programs. The Office of the Chief Information Officer, Vital Statistics Division of Digital Government and Service NL and Office of the Information and Privacy Commissioner are also key partners of NLCHI.

From a research perspective, NLCHI supports the Newfoundland and Labrador Primary Health Care Research and Integration to Improve Health System Efficiency (PRIIME) Network, Memorial University and the Translational and Personalized Medicine Initiative (TPMI). A number of federal organizations also provide funding to NLCHI to carry out analytical projects, including Health Canada and the Public Health Agency of Canada.

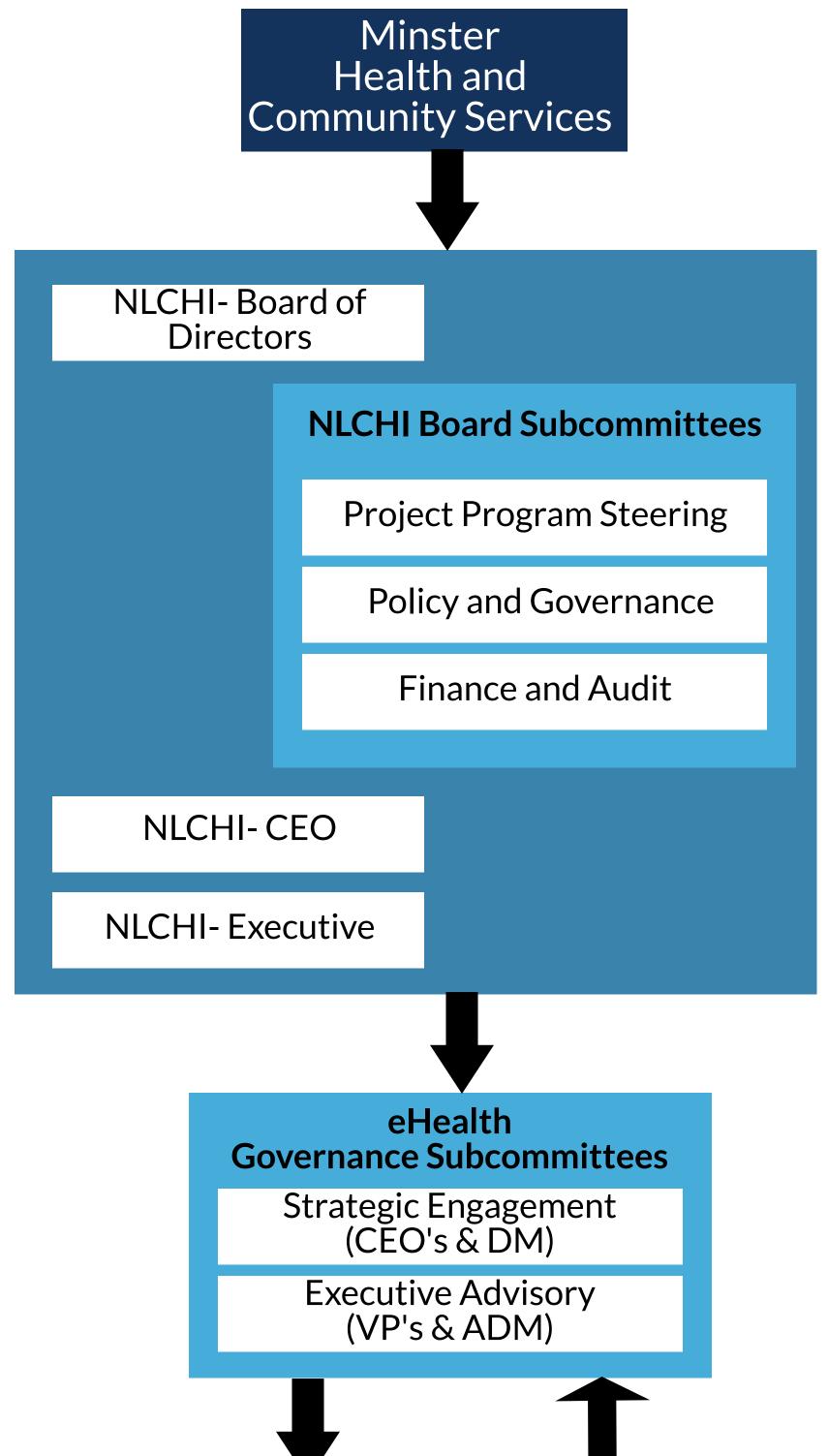
NLCHI is also part of the Health Data Research Network Canada which has received funding from Canadian Institutes of Health Research for the Strategy for Patient-Oriented Research Canadian Data Platform.

Partnerships with stakeholders are essential to the NLCIH's ability to meet its mandate and achieve its success.

# Appendix C

#### **NLCHI Governance Model**





#### **NLCHI Governance Advisory Committees**

Health Information Privacy Collaborative (HIPC)

HealtheNL Advisory

PACS Advisory

Patient Engagement Advisory

Personal Health Record Advisory

Pharmacy Advisory

Project Portfolio Committee

Provincial Data Analytics Oversight Committee

Virtual Care Advisory

Telepathology Advisory

#### eHealth Engagement Committees

RHA VPs of Corporate Services Committee

Western Health Engagement Committee

Labrador-Grenfell Health Engagement Committee

Eastern Health Engagement Committee

Central Health Engagement Committee

# Public Health Governance Primary Health Care Provincial Pharmacy Provincial Lab Provincial Pain Management Provincial DI Provincial Cardiology Eastern Health living lab Family Practice Renewal CH Supply Chain Governance

**Ancillary Committees** 

